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Evaluation of a Comprehensive Approach to Reducing Gun Violence in Detroit

Final Report

Submitted to the National Institute of Justice

Project Number 2004-IJ-CX-0022

BY

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ABSTRACT

Increasingly criminal justice agencies are integrating "data based" approaches into their operational strategies. This "new" model of criminal justice suggests that analysis of data on recent crime and violence incidents can lead to a more focused and targeted effort than previous enforcement efforts. Through such efforts, individuals, groups, and locations that exhibit a high level of gun violence within a limited geographic area are identified and a variety of intervention are then implemented. These interventions typically include both enforcement as well as offender focused interventions. These efforts differ from prior enforcement strategies in that they emphasize the integration of a problem analysis component in which data analysis is used to identify the patterns of gun violence in a small target area and enforcement resources are concentrated in this area.

However, this approach also differs from previous "crackdown" enforcement strategies in that there are also community and offender intervention components that are integral to this model. The community component seeks to identify ways in which the community can be involved in working with law enforcement to reduce gun violence in this area. This is often through increased community meetings, and establishing more frequent and effective means of communication between the community and local law enforcement.

In addition, the enforcement strategies used in this model are data and intelligence driven. As such they are focused on identifying the most problematic locations, groups and individuals that are most responsible for gun violence in this community.

This report documents the implementation and outcomes of the implementation of Project Safe Neighborhoods in one of the jurisdictions in which this model was first implemented.

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Executive Summary

In recent years there has been a movement emphasizing increasing use of analytical techniques in the design and operation of crime and violence reduction strategies. These innovative approaches are often termed strategic problem solving. These models typically include partnerships with various law enforcement and correctional agencies along with community or neighborhood alliances working together to identify the most serious aspects of the local violence problem. Subsequent to this problem identification, a coordinated multi-agency and community involved strategy was designed to focus intensive enforcement and intervention efforts on the locations, individuals, and groups that are principally responsible for this problem. Project Safe Neighborhoods represented a major effort and commitment from the Department of Justice to address gun and violent crime through this innovative approach.

The Project Safe Neighborhoods initiative was implemented in each of the Federal Judicial Districts through a multiagency task force which included members from local, state, and federal law enforcement along with representatives from correctional agencies particularly probation and parole. Further, the community was to be significantly involved though coordinated outreach, intervention, and prevention project components.

There were five key principals of the Project Safe Neighborhoods model.

- Partnerships – collaborative relationships involving a partnership with other law enforcement and criminal justice agencies as well as social service agencies and community groups. In addition, each task force had a research partner as well.

- Strategic Plan – PSN involves a problem solving process focused on identifying the most serious areas and groups for focused enforcement, intervention, and prevention activities.

- Training - Extensive training was provided to task forces in a variety of topics including strategic problem solving, firearms law enforcement, gun prosecution, and community outreach strategies.

- Outreach – PSN involved various outreach efforts to spread the deterrent message of "hard time for gun crime" to the intended audience.

- Accountability – PSN was based on delivering a strong message of accountability to violent and gun offenders regarding the consequence of their continued involvement in gun crime. In addition, each district had to track its progress on several standardized measures and report these results to the Department of Justice. (McGarrell, 2005)

Each district participating in Project Safe Neighborhoods was required to identify a specify area for the intervention. Typically these "target" areas were those that had experienced among the highest level of gun violence in the jurisdiction.

In addition, to this task force model, a characteristic that was to distinguish this approach from previous crime control strategies was that it was to be "data driven". Working closely with a research partner as well as law enforcement crime analysts, the Project Safe Neighborhoods task force was to design interventions that were consistent with focusing intensive efforts on the most problematic locations and offenders.

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This report focuses on the implementation and operation of this project in one jurisdiction. This jurisdiction had previously participated in the Strategic Approaches to Community Safety Initiative (SACSI), a precursor to Project Safe Neighborhoods. This prior initiative followed similar principles regarding focused and targeted interventions and thus this jurisdiction was well suited to implement an intervention that coincided with the principals of Project Safe Neighborhoods.

The evaluation of this project was presented with many and significant challenges. In particular there were significant changes in the intervention throughout the study period. These changes included line personnel as well as law enforcement leadership.

These changes resulted in a variation in the level of intensity across the project period. In addition, at times during the project there were personnel changes that also resulted in different perspectives and commitment to the principles of the PSN initiative. However, the time frame for analysis presented in this report, is from the period of time in which there was the most consistent intervention of the PSN project principles.

Two aspects of this initiative were identified for analysis as representing the project components that were most consistently in operation during the project period. These were the case review component and the overall effect of this set of interventions on gun violence.

Case/ Incident Reviews

One of the core components of Project Safe Neighborhoods is the case (or incident) review process (Klofas, J and N. Hipple, et. al., 2006). In this project component, individual criminal cases are systematically reviewed by not only prosecutors but also police officers who are part of the PSN enforcement team. These latter individuals have significant street knowledge

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about the gun violence situation as well as the role of various individuals and groups with regard to gun violence in the target area.

At these meetings the characteristics of each arrest in the target area for an offense involving a firearm is reviewed by not only the state and federal prosecutors assigned to the unit but also by all members of the PSN enforcement team (typically a sergeant/ squad leader and 5-6 officers assigned to this unit along with representatives from the Bureau of Alcohol, Tax, and Firearms (ATF), and the state and federal prosecutors assigned to this initiative. Typically this involves a discussion not just of the details of the current incident and arrest, but also of the offender and his/her role in the gun violence situation in the target area or jurisdiction. Based on this discussion a determination of prosecution venue (state or federal) is made. However an equally important aspect of these reviews is the discussion of the incident and the role of the offender in drug distribution as well as involvement with guns and violence in the target area/ jurisdiction.   In addition, intelligence regarding guns and violence that was obtained from a systematic debriefing of the arrestee is discussed. Thus while the manifest purpose of these meetings is to determine prosecution venue, an equally important aspect is the discussion of the gun/gang violence aspects of this individual and his group and the potential impact of prosecution of this case in state versus federal court.

Analysis was conducted on the case review process looking at the changes that occurred in how Carrying Concealed Weapons (CCW) cases were handled in 2006 and after the implementation of PSN in 2007. These dates do not coincide with exactly the implementation dates as project implementation occurred over a period of time and experienced frequent personnel changes until it became stabilized in late 2006 and early 2007. If PSN was working as intended we would expect that there would be a tightening of the case processing that would

result in fewer cases being dismissed and an increase in federal prosecution. Arrest data were obtained for CCW arrests that were made in the target area and these cases were then matched with the case prosecution filings with the court.

Analysis of these data over the two time periods, before and during the PSN intervention, indicated that the probability of charges being filed for a Carrying a Concealed Weapon offense did substantially rise over this period of time. In 2006, 46% of the CCW arrests were filed in court compared to 59% of the cases in the 2007. This is most likely due to the increased focus and systematic review of these cases along with the increased cooperation between the law enforcement and prosecution agencies during this period.

Thus, relative to the initial research question, there does appear to be a substantial increase in the likelihood of sanction for weapons possession offenses under the PSN model. A second consideration is did this increase in sanctions result in a decline in gun violence during this period of increased enforcement focus on gun possession offenses.

Impact on Gun Violence

Data were obtained for all non-fatal shootings and homicides for the period of January 1, 2006 through the week of March 23, 2008. From these data, a file was created for weekly total of shooting victimizations in each of six patrol districts. Another district had implemented a different violence intervention program at various times during the study period and was excluded from this analysis. A total of 117 weekly observations were recorded from each district. Thirty-nine weeks between October 1, 2006 and June 30, 2007 constituted the intervention period.

Thus there were three different periods of time used for this analysis. A 39 week period between January 1, 2006 through September 24th, 2006 constitutes the pre project period. The period of time between July 1, 2007 and March 23rd, 2008 represents the post PSN observation period.

There were three sets of analyses that were conducted on these data. First, a simple descriptive analysis describes the mean levels of gun violence in the intervention and non-intervention areas over the entire project period. Second, t-tests comparing the mean levels of gun violence across time periods provides insight into whether there were significant changes within the project area and if there were similar changes in other areas. Third, ARIMA analyses were conducted to examine the trends over time in each of these areas.

The initial analyses presented the mean number of shooting each week in the three different time periods; the Pre-PSN period, the PSN intervention period, and the post-PSN period. Comparisons were then made for each patrol area for each of these time periods. The district in which PSN was implemented had a reduction of 1.4 shooting victimizations per week compared to the pre-intervention period. During the post project period, shootings again increased, but not to the pre-project level. A series of t-tests revealed that the decline in fatal and non-fatal shootings was significant in the project period, while changes in other districts were not. However, analysis that included the post project period indicated that there was a decay of these effects over time to eventually return to near pre- intervention levels. It is important to note that when the project was operating at its peak levels of intensity, that there was on average a reduction over this 39 week period of one shooting per week.

The overall conclusion that can be drawn from this analysis is that the PSN gun initiative over the 39 weeks of observation had a small but statistically significant effect in reducing gun violence in this area. There was no similar pattern of shootings during this time in other areas of this jurisdiction. This suggests that there was a decline in gunshot victimization in the PSN area during the time that this project was most active. However, it also demonstrates the difficulty of maintaining these reductions after intensive enforcement activity.

Introduction

Criminal justice agencies are increasingly working towards interdependent and cooperative relationships to combat crime. Partnerships among agencies and external collaborators such as Universities have begun to characterize routines across many local criminal justice systems (Klofas, McGarrell & Hipple, 2010). The intensity, duration, and effectiveness of these partnerships is an important element for consideration in crafting new criminal justice innovations. More precisely, programmatic efforts to measure how criminal justice works together, innovates, and adopts new structures, processes, and routines is part of the *New Criminal Justice.* As such the current report presents a snapshot of gun violence reduction efforts in the city of Detroit, Michigan.

To accomplish this, the report is divided into several topic areas. First, an examination regarding the role criminal justice agencies can play violence reduction efforts is considered. Next, an outline of the nature of the project as implemented in Detroit is presented. This is followed by a discussion of the implementation of the project in terms of routines and processing of gun cases that were established and the intensity and duration of those changes are assessed. Data on case processing were drawn from criminal justice records to gauge the nature and extent of changes in the local criminal justice landscape vis-à-vis gun violence processing.

After the nature and extent of the intervention have been established, consideration of its impact on the problem at hand, namely gun violence, is the next issue under consideration. To test for the effect that these changes had on gun violence, a series of intervention analyses were conducted to establish whether a significant reduction in gun violence was observed in the experimental area. Timing of the intervention is drawn from the evaluation of changes in process in the handling and focus on gun cases in Northwest Detroit.

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Chapter 1:   Program Theory/ Background

The problem of crime and the apparent ineffectiveness of criminal justice responses are not new (nothing works, KCPPE, 1974). Much has been made of the fact that police alone may have limited effect on crime.   However, recently there have been promising results from interventions based upon an approach based that has become known as "strategic problem solving" (McGarrell, et.al, 2005). This approach was the basis of Project Safe Neighborhoods upon which this initiative was based.   This approach typically involves a multi-agency collaborative effort involving an intelligence/data driven strategy focused on the most serious gun violence issues including specific individuals or groups as well as locations that are significantly involved with incidents of gun violence.

These initiatives built upon the foundation established by the Boston Ceasefire Project, Richmond's Project Exile, and the Strategic Approaches to Community Safety Initiative (SACSI) which was implemented in ten jurisdictions across the country.   Each of these approaches emphasized a multi-agency, intelligence driven approach.   Typically this model involved the selection of a specific target or intervention area that was of moderate size in which intensive and focused enforcement and prosecution activities were conducted along with the implementation of additional activities emphasizing community engagement and involvement. In addition, a media campaign was also conducted in many jurisdictions emphasizing prevention as well as deterrence messages. In the SACSI model a research partner was also involved. The research partner worked closely with the project task force to provide data analysis and information to determine patterns in gun violence incidents, develop strategies for targeting and

focusing the enforcement as well as intervention components, and monitor the progress and impact of these initiatives.

There were five core components that were central to the Project Safe Neighborhood Initiative:

Partnerships – In each district the PSN initiative was based on a collaborative program that was conducted through a partnership involving law enforcement and correctional (local and state) agencies, social service agencies, city or other local government, community organizations, and a research team.

Strategic Plan – The Project Safe Neighborhoods approach is based on a problem solving strategy in which the PSN core team designs the specific elements of their strategy to address gun violence through data analysis designed to identify the individuals, places, and groups that driving gun violence in the project area. Ongoing data analysis is conducted throughout the implementation and operation of the various components of PSN in order to monitor the progress of the various components so that modifications can be made where and when such changes are needed.

Training - Another core aspect of Project Safe Neighborhoods was ongoing training for task forces to assist in the implementation of various project components. These training opportunities were conducted across the country to allow members of local task forces to participate as a team representing their district.

Outreach – Both local and national outreach efforts were involved in Project Safe Neighborhoods. Significant efforts were placed on a local outreach component to spread a deterrent message to potential offenders regarding the enhanced sanctions that awaited offenders through the use of a variety of local media.

Accountability – Accountability was emphasized both in the sense of holding offenders accountable for their behavior as well as an overall project accountability in that participating districts were responsible for accounting for their implementation of processes and interventions in full accord with the Project Safe Neighborhoods model.

The implementation of Project Safe Neighborhoods in Detroit was consistent with this model. A task force was formed representing all the principal local, state, and federal law enforcement agencies. Overall leadership and coordination was provided through the US Attorney's Office which played a central role in both the overall project leadership as well a major role in the prosecution of felons with firearms in federal court.

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Chapter 2: The New Criminal Justice and Gun Violence Reduction in Detroit

Criminal justice processes and routines vary across jurisdictions. This is not a revolutionary observation, as Wilson (1968) hypothesized that political culture yielded variations in criminal justice structures. In that work he identified three police styles of legalistic, watchman, and service approaches, linked to the larger political culture. His student, Martin Levin, extended the consideration of political culture to the influence on how courts process individuals in different cities (Levin, 197x). The idea that local criminal justice varies in its priorities and processes in the United States is now an area of theory and speculation (Duffee and Maguire, 2007).

Recently, Klofas, McGarrell, and Hipple (2010) coined the term "the new criminal justice" to explore how recognition of local variation plays an important role in crafting solutions to problems in the local environment. In this context, the current action research grant (TNCJ, 2010 author: Mock) was launched to provide a working partnership between academics at Michigan State University and the local Detroit criminal justice system. The principal agency in the project was the Detroit police department and partners included federal law enforcement (BATF, FBI), federal prosecution, Wayne county prosecution, and the community supervision (parole) personnel from the Michigan Department of Corrections. Leadership and coordination of this project was provided by the US Attorney's office.

Implementing Project Safe Neighborhoods in Detroit

The central element of the Project Safe Neighborhoods Initiative in Detroit was the case review process. At the core of this project component was the principle that offenses with a firearm particularly those involving felons in possession of a firearm should be vigorously

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enforced.   Prior to the initiation of Project Safe Neighborhoods in Detroit, this jurisdiction had participated in the Strategic Approaches to Community Safety Initiative (SACSI).   This precursor to PSN, implemented in ten jurisdictions across the country also had a focus on gun violence, however, through the PSN initiative there was a more systematic case review process established.   In this project component, all arrests involving a firearm in the target area were reviewed on a weekly basis.   This review was conducted by representatives from the US Attorney's office, the local prosecutor's office, the Bureau of Alcohol, Tobacco, and Firearms (ATF), and members of the enforcement team from local law enforcement agencies.   These individuals were assigned full time to the project from their respective local or state law enforcement agencies. In addition, there was an agent from ATF who was also assigned to work full time with this unit.   This group was responsible for gathering intelligence regarding individuals and groups in the target area and conducting enforcement actions aimed at disrupting drug selling in these neighborhoods and arresting and prosecuting those involved.   Although law enforcement agencies had worked cooperatively prior to this project, this initiative represented a greater level of cooperation and information sharing in that members of this unit were collocated and worked fulltime in this assignment over a considerable period of time.

A meeting was held each week to discuss the arrests of the previous week.   These case review meetings involved a discussion of each of the arrests for a gun offense, typically a felon in possession of a firearm offense.   While a principal purpose of this discussion was to determine the most appropriate prosecution venue (state or federal), another important purpose was to exchange information and intelligence regarding the role of the arrestee with guns and gangs in the target area.   This meeting was attended by not only the local and federal prosecutors assigned to this group but by all members and supervisors of the enforcement unit. In addition, the

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research partner attended these meetings on a regular basis. Based on the discussion of these cases and the role of each arrestee in guns and gangs a prosecution venue was determined.

In addition to determining the most appropriate prosecution venue, these meetings played a key role in determining future enforcement actions and strategies. An additional principal purpose of this discussion was to exchange intelligence about guns and gang activity in the target area. One member of the task force was assigned the duty of interviewing each individual arrested for a gun offense in the target area. From these interviews significant information and actionable intelligence was generated regarding the groups and individuals who were most involved in gang activity and gun violence in the target area. This information formed the core of this intelligence driven intervention that was a cornerstone of the Project Safe Neighborhoods approach.

These weekly meetings were attended by all members of the enforcement unit, including the intelligence officer and crime analyst, the research partner, along with the state and federal prosecutors who were assigned to this responsibility. In addition, there was often a representative from the Department of Corrections at this meeting as well. This individual contributed considerable information about individuals who were currently on parole in the target area who may either be involved with active gangs or who could provide information about active offenders and groups in the area.

The agencies who were active participants in this project included the US Attorney's Office, Eastern District of Michigan, the Wayne County Prosecutors Office, the Detroit Police Department, the Michigan Department of Corrections, and the School of Criminal Justice at Michigan State University. In addition, there were community groups also involved including the Detroit Community Justice Partnership and Weed and Seed.

Case Review Summary and Analysis

The primary and sustained effort to deal with gun carrying involved gun reviews which were most active from October 2006 through June of 2007. To examine how processing changed in the Northwest District (NWD) we examined the treatment of cases of "carrying concealed weapons" (CCW) from 2006 and 2007 to capture the nature of the initiative in this period. Local criminal justice changes of this sort are consistent with *The New Criminal Justice* outlined by Klofas, McGarrell, & Hipple (2010). Individual cases were screened by a working group of Detroit police, local prosecutors and federal prosecutors. Details regarding the nature of this interaction are captured in the preceding qualitative discussion.

Here we examine the cohort of CCW arrestees in 2006 and compare them with those apprehended in 2007 to offer some sense of the quality of criminal justice processing that changed across these periods. If the program, when operational, was working as intended greater attention to the CCW issue in the NWD should have led to a tightening of the processing of these offenders. For example, we would expect greater federal attention for some subset of cases and perhaps an increase in formal processing at the local level. This is partially testable with a set of cases compared across the two years.

The primary effect and vigor of the working group was identified as overlapping these two years (late 2006, most vigorous until approximately June 2007) but for tracking purposes the two years are examined separately as the awareness of CCW issues likely took some time to percolate into the criminal justice system processes and likewise it also is reasonable that the effort persisted for some period after the cessation of the most vigorous efforts in June 2007. This makes the comparison of 2006 cases with 2007 a defensible choice for analysis.

Finally, an examination of those individuals who, in 2007, were identified for further Federal consideration are examined with regard to the seriousness of prior records and case

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outcomes. The identification of serious offenders for extensive consideration and special processing is part of the overall case review approach and those identified for consideration for federal prosecution should, on balance, represent serious offenders if the program is to be effective. Knowledge of effective dose and duration, at this juncture, is sparse. The theory behind the idea of focusing on serious offenders, however, is consistent with prior research and current policy recommendations (Wolfgang, Figlio & Sellin, 1972; Sherman & Martin, 1986, Sherman, 2011, c.f. Walker, 2004).

Data Sources

In the following analyses, several data sources were search and merged to obtain the current perspective on CCW offenders and their prior records in the NWD. First DPD arrest data were obtained for the two years and isolated for those arrestees in the NWD. These data were then matched with the local court database known as CRIM. This database indicates if charges were filed, when complete, what the final status of the case is in terms of outcome (trial, plea, conviction, etc.) and sentencing information. Due to the separation of platforms across organization, the search process requires a case by case lookup approach. Additional information is gleaned from the Law Enforcement Information Network (LEIN) which will have a more expansive summary of prior arrests and convictions for each offender in the arrest database. Again, this entails an individual arrest history lookup process and data outside of the state of Michigan may be incomplete and data from within the state also may only be partially complete.

Below we make some assumptions about cases not found in the various systems and the existence of clean records for those individuals (i.e., no prior arrests). While this assumption may be weak in light of data issues just addressed, they present identical problems for any

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process which seeks to determine prior records of individuals. The inadequacy, flaws, and gaps in data collection are not understudy here, but is an issue for consideration in program execution relying on such information.

CCW Arrestees in 2006

The total number of CCW arrestees logged for 2006 in the NWD is 632. There were 13 arrestees with more than one entry (determined by same last name, first name, middle name, and date of birth). Five of the 13 arrestees with multiple entries have variable arrest dates (i.e., one arrest date earlier in the year and one later in the year). Removal of these 8 duplicates reduces the number of CCW arrestees for 2006 to 624.

Preliminary 2006 Case Flow

Forty-six percent (n=286) of the 624 arrestees had accessible court information in CRIM. Charges were filed for these individuals and court proceedings were undertaken. Dispositions for these individuals may include dismissals in addition to specified outcomes. The remaining 54% (n=338) were not found in CRIM. We assume that these latter arrestees had their charges dropped since they were not found in CRIM.

Criminal History.

Criminal history record information was captured from two sources: LEIN summaries from DPD departmental files and CRIM, a remote database that provides information on district and circuit court processing. There were problems associated with these two data sources. LEIN summaries provide information primarily on arrests. Conviction information is often missing or has not yet been updated (pending court disposition information to the state police). CRIM primarily provides conviction information. Arrest information is not provided, but one can

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assume that a prior conviction was associated with an arrest. If charges were not filed in court, the court disposition information has not yet been updated, or if the court proceedings were outside of the local jurisdiction, the court information will not be available (and by implication either will the arrest associated with the court proceeding).

Table 1 provides information on the criminal history background of the arrestees with CCW charges filed in court. Seventeen percent of the arrestees had prior weapons arrests and 16% had prior violent crime arrests. Thirteen percent had prior weapons offense convictions, 11% had prior drug offense convictions and 10% had prior violent offense convictions. Ten percent of the arrestees had served a prior prison sentence and 9% had served a prior jail sentence. The overall means for the criminal history backgrounds are low due to the inclusion of the entire population in the calculation of the mean (those with and without criminal history information).

Table 2 presents criminal history information in collapsed categories. Forty-two percent of the arrestees had at least one prior felony arrest, while the remaining 58% did not have prior felony arrests. Thirty-two percent of the arrestees had at least one prior felony conviction.

Table 1: Criminal History Backgrounds for 2006 Arrestees with Charges Filed (n=286).

	Proportion of Total	Overall Mean (s.d.)	Minimum Values	Maximum Values
Violent Crime Arrests	16%	.21 (.55)	0	3
Violent Crime Convictions	10%	.11 (.34)	0	2
Property Crime Arrests	12%	.17 (.55)	0	5
Property Crime Convictions	9%	.12 (.44)	0	4
Drug Crime Arrests	14%	.21 (.61)	0	5
Drug Crime Convictions	11%	.14 (.46)	0	4
Weapons Crime Arrests	17%	.20 (.48)	0	3
Weapons Crime Convictions	13%	.14 (.37)	0	2
Misdemeanor Convictions	4%	.05 (.25)	0	2
Prior Prison Sentences	10%	.13 (.41)	0	3
Prior Jail Sentences	9%	.13 (.42)	0	1

Table 2: Criminal History Categories for 2006 Arrestees with Charges Filed (n=286).

	Frequency	Percent
At Least One Felony Arrest	121	42%
At Least One Felony Conviction	91	32%
At Least One Misdemeanor Conviction	12	4%
At Least One Prison Sentence	30	11%
At Least One Jail Sentence	27	9%

KEY: At least one felony arrest/conviction is a combination of violent, property, drug, and weapon offense arrests/convictions.

Case Disposition. Tables 3 though 5 present information on the case disposition patterns and sentences arrestees:

- Sixty-five percent of the arrestees pled guilty to their charges in court. Eighteen percent of the arrestees had their charges dismissed via court proceedings and 6% were found guilty in a jury trial (from Table 3).

- Consolidating the sentence types to the most serious type, the most frequently occurring sentence is probation (33% of total, 43% of adjusted total)[1]. Prison is the next most frequently occurring sentence (20% of total, 27% of adjusted total), followed by jail (7% of total, 10% of adjusted total) and fines (6% of total, 8% of adjusted total) (from Table 4).

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[1] The consolidation strategy prohibits combinations or overlaps of sentences (e.g., probation plus fine, prison plus probation, etc.). Instead, one sentence is given contingent upon the most serious sentence type in the combination. Prison is considered the most serious sentence and is followed by jail, probation, and fine in decreasing order of seriousness.

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- In terms of the most serious sentence type, those who pled guilty or were found guilty by a bench trial were significantly more likely to receive a probation sentence. A prison sentence was the next most frequently occurring sentence for those who pled guilty. Those who pled no contest or were found guilty by a jury trial were significantly more likely to receive a prison sentence. All of those arrestees who pled no contest were sentenced to prison (from Table 5).

Table 3: Case Dispositions (n=286).

	Frequency	Percent
Pled Guilty	186	65%
Dismissed	51	18%
Jury Trial – Guilty	18	6%
Disposition Pending	11	4%
Bench Trial – Guilty	7	2%
Jury Trial – Not Guilty	5	2%
Pled No Contest	4	1%
Bench Trial – Not Guilty	3	1%
Suspended	1	<1%

NOTE: disposition pending category is used to describe cases in which a disposition is lacking (cannot determine the conclusion of a trial or whether a plea was made).

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Table 4: Sentences by Most Serious Sentence Type (n=286).

	Frequency	Percent	Adj Percent (n=215)
Probation	93	33%	43%
Prison	58	20%	27%
Jail	21	7%	10%
Fine	18	6%	8%
Missing	96	34%	(25) 12%

NOTE: categories by most serious sentence disposition, with prison being the most serious followed by jail, probation, and fine.

Table 5: Dispositions by Most Serious Sentence Type (n=215).

	Probation	Prison	Jail	Fine	Missing
Pled Guilty	86 (46%)	41 (22%)	21 (11%)	16 (9%)	22 (12%)
Jury Trial – Guilty	3 (17%)	12 (67%)	0	1 (6%)	2 (11%)
Bench Trial – Guilty	4 (57%)	1 (14%)	0	1 (14%)	1 (14%)
Pled No Contest	0	4 (100%)	0	0	0

*differences across sentence types are statistically dependable p<.05.

NOTE: categories by most serious sentence disposition, with prison being the most serious followed by jail, probation, and fine. Caution is needed with statistically dependable results in cells with null entries. The difference may be more of a product of a null value than a true difference across sentence types.

The 2006 data can be most easily visualized as a flow chart, such as can be found in figures 1 and 2 below. Here we observe case attrition in 2006 and the extensive charge dropping 54% at the initial processing of cases from the NWD. Put differently, 46% of the arrestees cases resulted in charges being filed. If we remove the 11 pending cases we note that of the 275 cases processed, 215 resulted in sanctions, or about 1 in 3 of the total arrested for CCW. It is interesting to note that this number compares with the 1/3 of arrestees that were identified with having prior felonies. In 2006, however, there was not a focused effort in identifying arrestees with prior felonies for extensive processing. So, although offenders with prior records received longer sentences, this approach was not systematically applied until the closing months of 2006.

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Figure 1: Case Flow of 2006 Arrestees (Allowing Overlap).
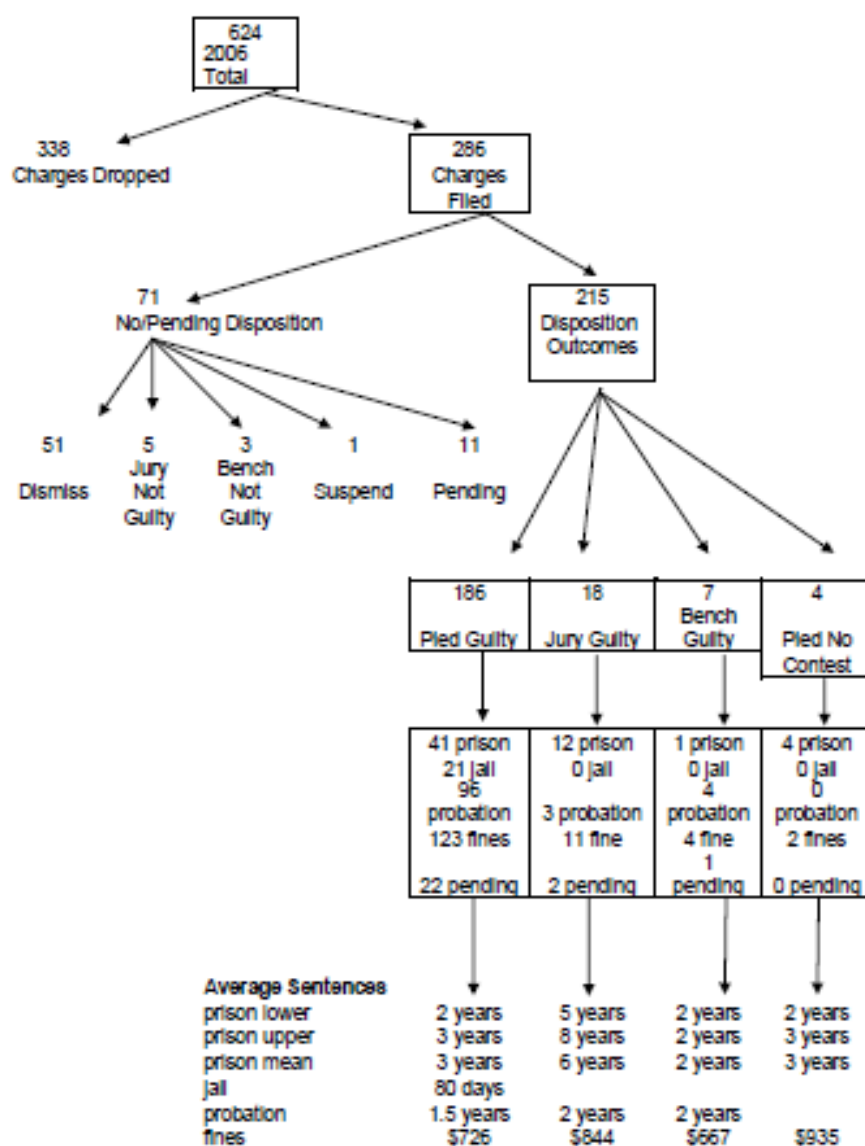
Figure 2: Case Flow of 2006 Arrestees (Not Allowing Overlap for Sentences Outcomes).

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                          624
                          2006
                          Total

        338                         286
   Charges Dropped               Charges
                                  Filed

              71                          215
        No/Pending Disposition       Disposition
                                     Outcomes

  51      5        3        1       11
 Dismiss Jury    Bench   Suspend  Pending
         Not     Not
        Guilty  Guilty
```

186	18	7 Bench	4
Pled Guilty	Jury Guilty	Guilty	Pled No Contest
41 prison	12 prison	1 prison	4 prison
21 jail	0 jail	0 jail	0 jail
86		4	0
probation	3 probation	probation	probation
16 fines	1 fine	1 fine	0 fines
		1	
22 pending	2 pending	pending	0 pending

Average Sentences				
prison lower	2 years	5 years	2 years	2 years
prison upper	3 years	8 years	2 years	3 years
prison mean	3 years	6 years	2 years	3 years
jail	80 days			
probation	1.5 years	2 years	2 years	
fines	$780	$600	$350	

2007 PSN CCW Reviewed Arrests

The total number of PSN reviewed CCW arrestees logged for 2007 in the NWD is 583. There are 9 arrestees with more than one entry (determined by same last name, first name, middle name, and date of birth). Eight of the 9 arrestees with multiple entries have variable arrest dates (i.e., one arrest date earlier in the year and one later in the year). The remaining arrestee with multiple entries is simply a duplicate with the secondary arrest date capturing the same arrest date as the first. Removal of the one clear duplicate reduced the number of PSN reviewed CCW arrestees for 2007 to 582.

Preliminary 2007 Case Flow

Fifty-nine percent (n=344) of the 582 arrestees had accessible court information in CRIM. Charges were file and court proceedings were undertaken for these arrestees. Dispositions for these individuals may include dismissals in addition to specified outcomes. The remaining 41% (n=238) were not found in CRIM. We assume that these latter arrestees had their charges dropped since they were not found in CRIM.[2]

Table 6 provides information on the criminal history background of the arrestees with CCW charges filed in court. Twenty-one percent of the arrestees had prior weapons arrests and 15% had prior violent crime arrests. Ten percent had prior weapons offense convictions, 11% had prior drug offense convictions and 10% had prior violent offense convictions. Twelve percent of the arrestees had served a prior prison sentence and 15% had served a prior jail

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[2] The same problems associated with these data sources in 2006 were found in 2007. LEIN summaries provide information primarily on arrests. Conviction information is often missing or has not yet been updated (pending court disposition information to the state police). CRIM primarily provides conviction information. Arrest information is not provided, but one can assume that a prior conviction was associated with an arrest. If charges were not filed in court, the court disposition information has not yet been updated, or if the court proceedings were outside the local jurisdiction, the court information will not be available (and by implication either will the arrest associated with the court proceeding).

sentence. The overall means for the criminal history backgrounds are low due to the inclusion of the entire population in the calculation of the mean (those with and without criminal history information).

Table 7 presents criminal history information in collapsed categories. Forty-two percent of the arrestees had at least one prior felony arrest, while the remaining 58% did not have prior felony arrests. Thirty percent of the arrestees had at least one prior felony conviction.

Table 6: Criminal History Backgrounds for 2007 Arrestees with Charges Filed (n=344).

	Proportion of Total	Overall Mean (s.d.)	Minimum Values	Maximum Values
Violent Crime Arrests	15%	.24 (.69)	0	7
Violent Crime Convictions	10%	.11 (.35)	0	2
Property Crime Arrests	20%	.31 (.80)	0	8
Property Crime Convictions	13%	.17 (.53)	0	5
Drug Crime Arrests	18%	.33 (.87)	0	7
Drug Crime Convictions	11%	.17 (.58)	0	5
Weapons Crime Arrests	21%	.28 (.65)	0	4
Weapons Crime Convictions	10%	.13 (.42)	0	3
Misdemeanor Convictions	14%	.18 (.48)	0	3
Prior Prison Sentences	12%	.19 (.64)	0	5
Prior Jail Sentences	15%	.19 (.50)	0	3

Table 7: Criminal History Categories for 2007 Arrestees with Charges Filed (n=344).

	Frequency	Percent
At Least One Felony Arrest	146	42%
At Least One Felony Conviction	102	30%
At Least One Misdemeanor Conviction	50	14%
At Least One Prison Sentence	41	12%
At Least One Jail Sentence	52	15%

KEY: At least one felony arrest/conviction is a combination of violent, property, drug, and weapon offense arrests/convictions.

Case Disposition. Tables 8 through 10 present information on the case disposition, and sentences for the arrestees:

- Forty-two percent of the arrestees pled guilty to their charges in court. Fifteen percent of the arrestees had their charges dismissed, 3% were found guilty in a jury trial, and an additional 3% were found guilty in a bench trial. Thirty-four percent of the arrestees are awaiting a disposition (from Table 8).

- Consolidating the sentence types to the most serious type, the most frequently occurring sentence is probation (16% of total, 33% of adjusted total)[3]. Prison is the next most frequently occurring sentence (11% of total, 23% of adjusted total), followed by jail (6%

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[3] The consolidation strategy prohibits combinations or overlaps of sentences (e.g., probation plus fine, prison plus probation, etc.). Instead, one sentence is given contingent upon the most serious sentence type in the combination. Prison is considered the most serious sentence and is followed by jail, probation, and fine in decreasing order of seriousness.

of total, 12% of adjusted total). Only one arrestee received a fine when sentence types were consolidated into the most serious sentence type (from Table 9).

▪ In terms of the most serious sentence type, as presented in table 10, all of those who pled no contest received a probation sentence. Those who were found guilty by a bench trial were most likely to have received a probation sentence, while those who were found guilty by a jury trial were more likely to have received a prison sentence. Those who pled guilty appear to be more likely to have received a probation or prison sentence (but there are a substantial proportion of the dispositions awaiting sentence information).

Table 8: Case Dispositions (n=344).

	Frequency	Percent
Pled Guilty	146	42%
Disposition Pending	118	34%
Dismissed	53	15%
Jury Trial – Guilty	10	3%
Bench Trial – Guilty	10	3%
Bench Trial – Not Guilty	3	1%
Jury Trial – Not Guilty	2	1%
Pled No Contest	2	1%

NOTE: disposition pending category is used to describe cases in which a disposition is lacking (cannot determine the conclusion of a trial or whether a plea was made).

Table 9: Sentences by Most Serious Sentence Type (n=344).

	Frequency	Percent	Adj Percent (n=168)
Probation	55	16%	33%
Prison	38	11%	23%
Jail	20	6%	12%
Fine	1	<1%	1%
Missing	230	67%	(54) 32%

NOTE: categories by most serious sentence disposition, with prison being the most serious followed by jail, probation, and fine.

Table 10: Dispositions by Most Serious Sentence Type (n=168).

	Probation	Prison	Jail	Fine	Missing
Pled Guilty	47 (32%)	32 (22%)	18 (12%)	1 (1%)	48 (33%)
Jury Trial – Guilty	1 (10%)	5 (50%)	1 (10%)	0	3 (30%)
Bench Trial – Guilty	5 (50%)	1 (10%)	1 (10%)	0	3 (30%)
Pled No Contest	2 (100%)	0	0	0	0

NOTE: categories by most serious sentence disposition, with prison being the most serious followed by jail, probation, and fine.

Like the previous year's CCW cases the 2007 data can be most easily visualized as a flow chart, such as can be found in figures 3 and 4 below. Here we observe case attrition at the filing stage in 2007 is muted in the NWD, contemporaneous with the increased attention to CCW cases

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provided by NWD working group of officers and county and federal prosecutors. Charges were dropped or not pursued in 41% of arrests during the initial processing of cases from the NWD. Put differently, 59% of the arrestees cases resulted in charges being filed. If we remove the 118 pending cases we note that of the 226 cases processed, 168 resulted in sanctions, or about 3 in 10 of the total arrested for CCW, and approximately 75% of the cases (excluding pending) which were processed resulted in some sanctions.

The proportions receiving sanctions are comparable to those obtained in 2006, however, but the addition of federal prosecutions as a potential outcome in 2007 must also be addressed. Overall, processing of CCW offenders, once charges were filed, appeared relatively stable across the two periods (though at the time of analysis 118 pending cases requiring resolution requires some assumption that the outcomes of those cases will be similar to those decided).

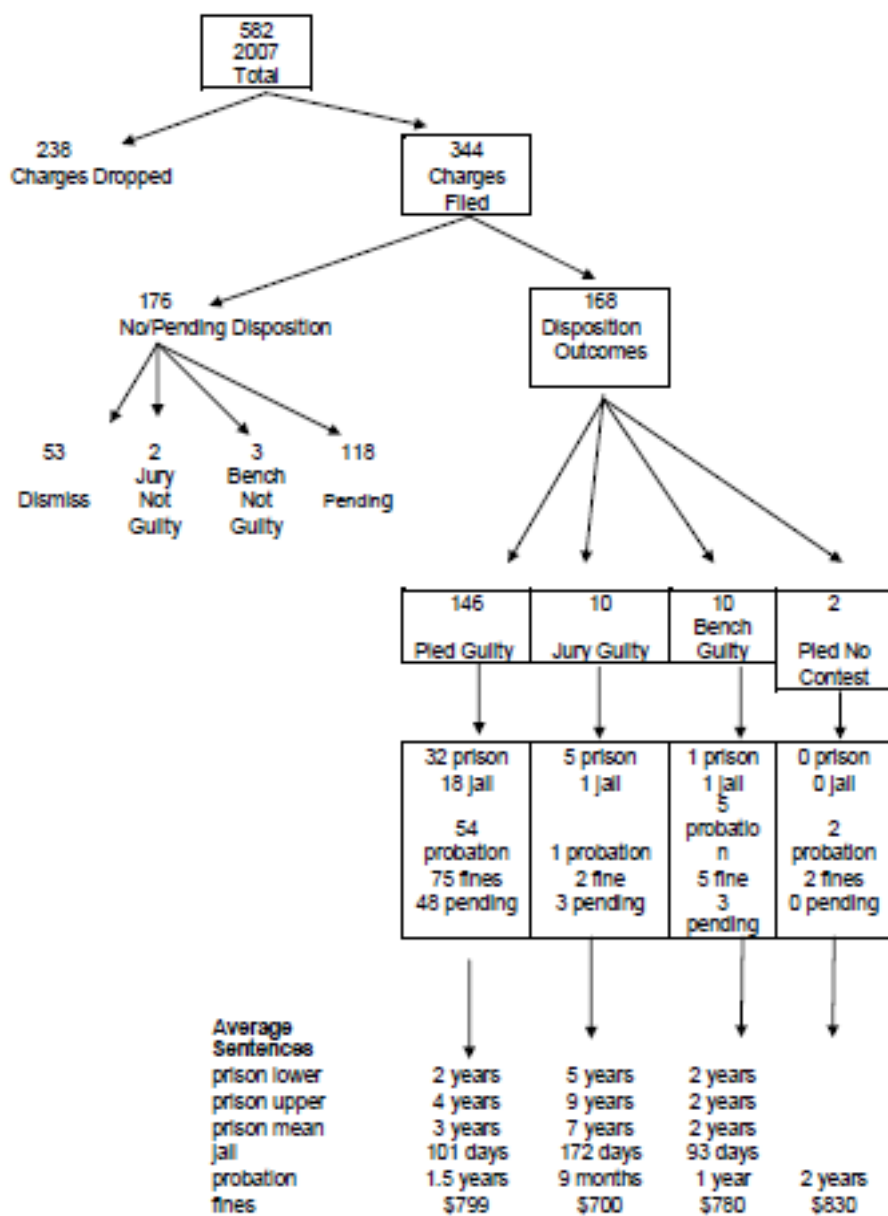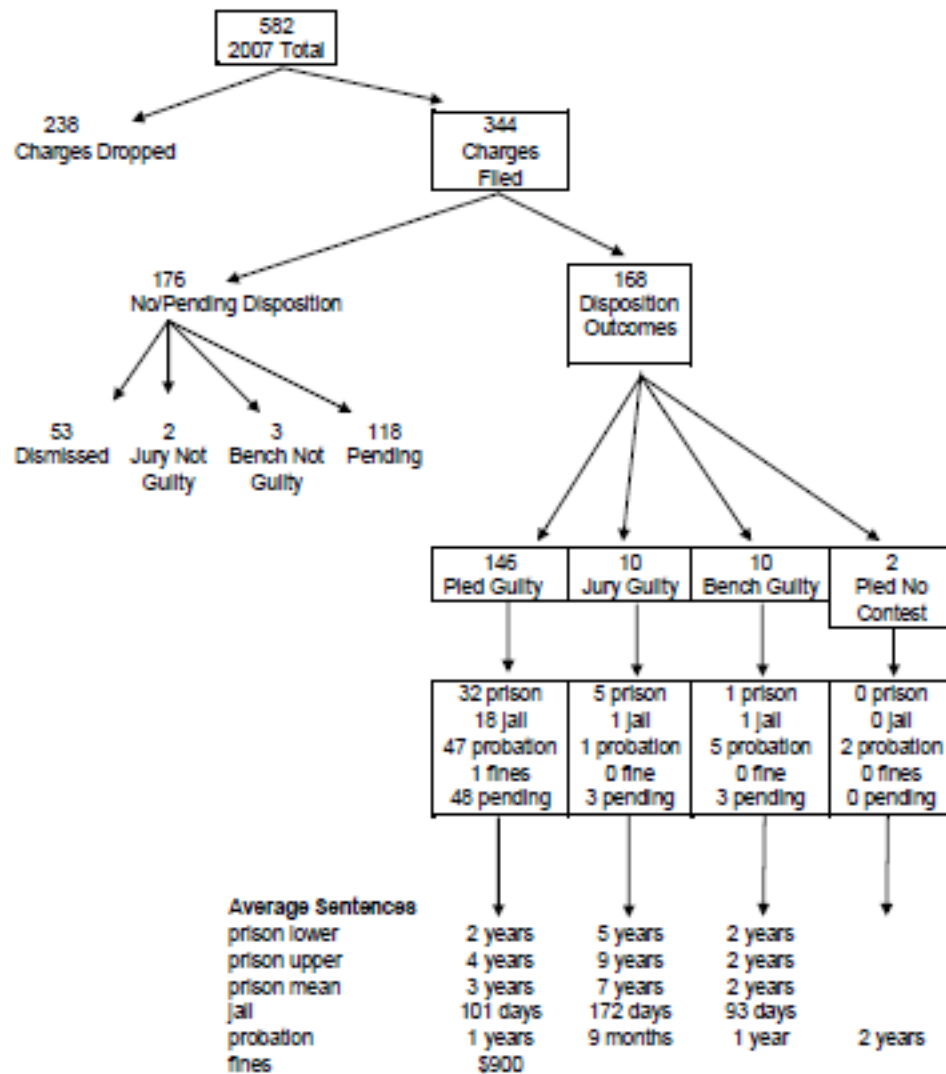Figure 3: Case Flow of 2007 Arrestees (Allowing Overlap).

Figure 4: Case Flow of 2007 Arrestees (Not Allowing Overlap).

Rather than changing an entire process that, in one section of Detroit apprehends 600 people annually for criminal justice processing, the NWD working group focused on high impact individuals, with prior felony convictions, that could be eligible for federal prosecution. This case review process does filter the whole of the case load, but much in the risk assessment mode of Sherman (2011) attempts to allocate the attention of the system on the more serious offenders.

To illustrate this, we next turn attention to the federal processing and review of cases in the 2007 cohort. It should be noted that among these arrestees those with one felony conviction represented 102 individuals or about 30% of the total against whom which charges were filed, and about 18% of the total number that were apprehended. These cases would represent those ripe for review. Below the federally reviewed cases are discussed.

Federal Prosecution[4]

Six percent of all 2007 arrestees were considered for federal prosecution in 2007 (n=33)[5]. Eighty-eight percent (n=29) of those considered for federal prosecution had accessible (preliminary) state court information in CRIM. State charges were filed and state court proceedings were undertaken for these arrestees. The remaining 12% (n=4) did not have (preliminary) state court information in CRIM. This is not to say that all charges were dropped for these arrestees. Rather, state charges were dropped and federal charges may have been pursued.

Table 11 provides a comparison of criminal history backgrounds for arrestees with state charges filed and arrestees who are considered for federal prosecution. For all of the criminal history categories, arrestees considered for federal prosecution have a higher proportion of

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[4] At the outset, it is important to note that information on arrestees considered for federal prosecution is rather limited. Court information is gathered from CRIM, a remote database of state court proceedings. Information on the federal prosecution of arrestees cannot be captured via CRIM.

[5] The total number of arrestees considered for federal prosecution is 34. One arrestee was removed from the discussion due to the lack of identifying information. This reduces the total to 33.

arrestees with a specified criminal history background and a higher average number of specified criminal history records. Very simply, this means that a higher proportion of arrestees considered for federal prosecution had a specified criminal history record and their records were longer than those arrestees with state charges filed. Significant differences were observed for every criminal history category with the exception of arrests and convictions for felony property offenses.

Some of the more notable differences between the two groups are found for violent crime arrests and convictions, drug arrests and convictions, weapons arrests and convictions, and prior prison and jail sentences. Fifty-nine percent of those considered for federal prosecution had prior drug arrests and 52% had prior violent felony convictions. Comparatively, only 15% of arrestees with state charges filed had prior violent felony arrests and 7% had prior violent felony convictions. Forty-five percent of those considered for federal prosecution had prior weapons arrests, 24% had prior weapons convictions, 31% had prior violent felony arrests, and 21% had prior violent felony convictions. The proportion of arrestees with state charged filed having these criminal history backgrounds is dramatically lower: 19% had prior weapons arrests, 9% had prior weapons convictions, 13% had prior violent felony arrests, and 9% had prior violent felony convictions. In terms of prior prison sentences, 38% of those considered for federal prosecution had served a prior prison sentence, while only 9% of those with state charges filed had served a prior prison sentence.

Table 12 presents criminal history information in collapsed categories. The differences become even more apparent. Seventy-nine percent of arrestees considered for federal prosecution had at least one prior felony arrest compared with 39% of those arrestees with state

charges filed. It should be noted, again that in data systems with greater coverage, prior arrests and convictions not apparent from LEIN or CRIM might indicate more serious records, we assume the records gap is similar across the two samples. Seventy-two percent of those considered for federal prosecution had at least one prior felony conviction according to data gleaned from CRIM and LEIN systems, while 26% of those with state charges filed had at least one felony conviction.

Table 11: Criminal History Backgrounds 2007 Arrestees and Federal Considerations.

	Arrestees with Charges Filed (n=315)		Federal Considerations (n=29)	
	Proportion of Total	Overall Mean (s.d.)	Proportion of Total	Overall Mean (s.d.)
Violent Crime Arrests*	13%	.21 (.67)	31%	.52 (.87)
Violent Crime Convictions*	9%	.10 (.33)	21%	.24 (.51)
Property Crime Arrests	19%	.29 (.78)	31%	.52 (.95)
Property Crime Convictions	13%	.16 (.50)	17%	.28 (.80)
Drug Crime Arrests*	15%	.23 (.67)	59%	1.38 (1.72)
Drug Crime Convictions*	7%	.10 (.43)	52%	.90 (1.17)
Weapons Crime Arrests*	19%	.26 (.64)	45%	.55 (.74)
Weapons Crime Convictions*	9%	.11 (.40)	24%	.28 (.53)
Misdemeanor Convictions*	12%	.16 (.46)	38%	.45 (.63)
Prior Prison Sentences*	9%	.15 (.53)	38%	.72 (1.28)
Prior Jail Sentences*	14%	.17 (.47)	31%	.41 (.68)

*differences in proportion with specified criminal history and mean arrest/conviction history records are statistically dependable $p<.05$.

NOTE: The overall means for the criminal history backgrounds are low due to the inclusion of the entire population in the calculation of the mean (those with and without criminal history information).

Table 12: Criminal History Categories for 2007 Arrestees and Federal Considerations.

	Arrestees with Charges Filed (n=315)	Federal Considerations (n=29)
At Least One Felony Arrest*	39%	79%
At Least One Felony Conviction*	26%	72%
At Least One Misdemeanor Conviction*	12%	38%
At Least One Prison Sentence*	9%	38%
At Least One Jail Sentence*	14%	31%

*differences in proportion with specified criminal history records are statistically dependable $p<.05$.

KEY: At least one felony arrest/conviction is a combination of violent, property, drug, and weapon offense arrests/convictions.

Case Disposition.   Table 13 presents information on the state court case disposition and sentences for 2007 CCW arrestees under federal consideration. It is important to note that state court dispositions and sentences should not be found. These arrestees were under consideration for federal prosecution. The finding of state court dispositions and sentences indicates that federal prosecution was not undertaken. It is also important to take caution in interpreting the statistics on the arrestees under consideration for federal prosecution. The number of arrestees is small and the processing of arrestees though state court is even smaller. Statistics based upon small sample sizes may be unreliable.

- Forty-five percent of the arrestees under consideration for federal prosecution had their charges dismissed. It is assumed (and verified) that arrestees whose charges were dismissed in state court were dismissed with the intention of federal prosecution. Twenty-eight percent of the arrestees pled guilty to state charges, 1 arrestee was found guilty in state court to a jury trial, and 1 arrestee was found not guilty in a state court jury trial. The remaining 28% are pending disposition, which may or may not subsequently proceed through the state court (from Table 13).

- Consolidating the sentence types to the most serious type, the most frequently occurring sentence is prison (14% of total, 44% of adjusted total). Probation is the only other sentence type, with 3 arrestees (10% of total, 33% of adjusted total) receiving a probation sentence (from Table 14).

Table 13: Case Dispositions (n=29).

	Frequency	Percent
Dismissed	13	45%
Pled Guilty	8	28%
Disposition Pending	6	21%
Jury Trial – Guilty	1	3%
Jury Trial – Not Guilty	1	3%

NOTE: disposition pending category is used to describe cases in which a disposition is lacking (cannot determine the conclusion of a trial or whether a plea was made).

Table 14: Sentences by Most Serious Sentence Type (n=29).

	Frequency	Percent	Adj Percent (n=9)
Prison	4	14%	44%
Probation	3	10%	33%
Missing	22	76%	(2) 22%

NOTE: categories by most serious sentence disposition, with prison being the most serious followed by jail, probation, and fine.

Figure 5: Case Flow of 2007 Arrestees under Federal Consideration (Allowing Overlap).

Average Sentences
prison lower   2 years
prison upper   2 years
prison mean   2 years
probation   2 years
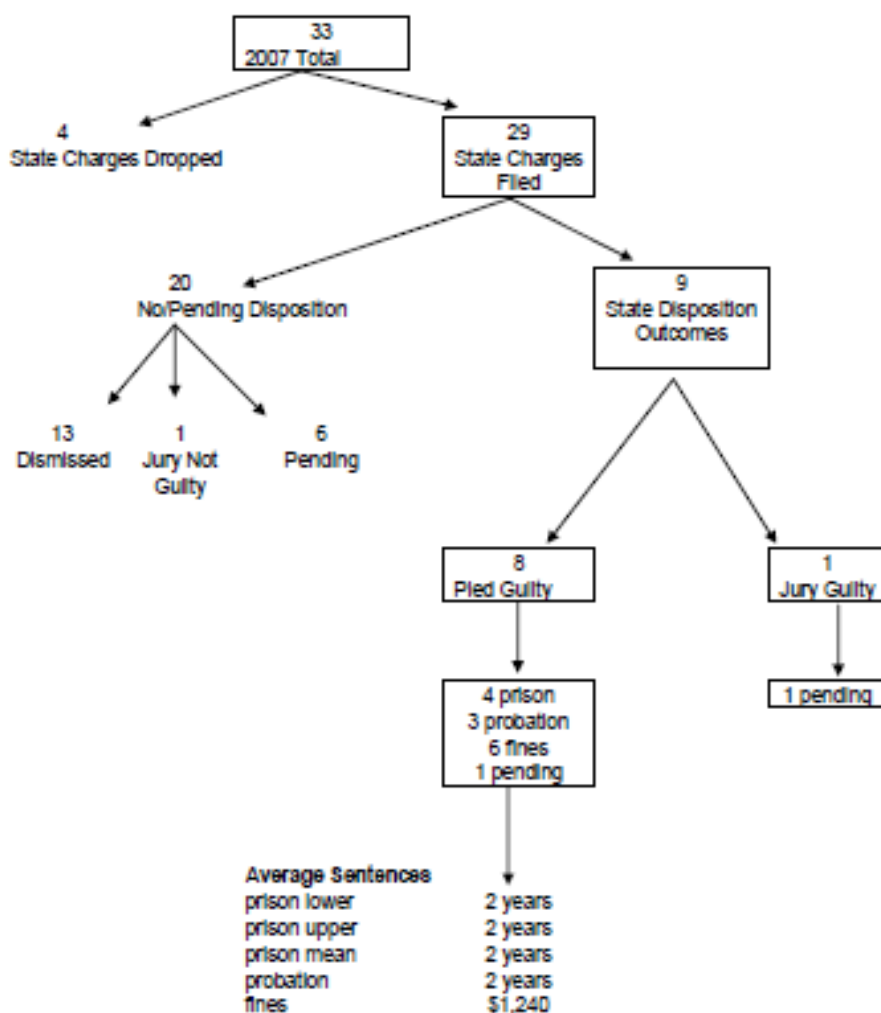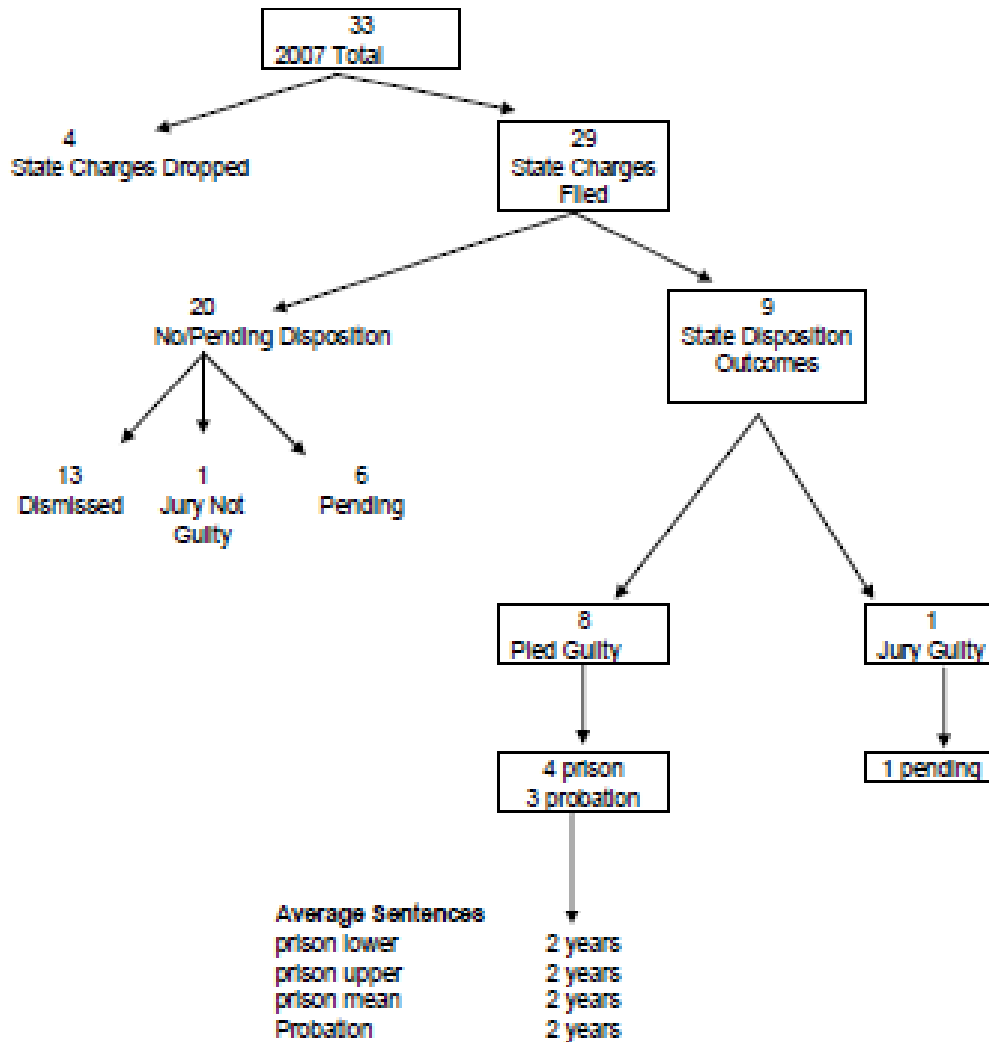fines $1,240

Figure 6: Case Flow of 2007 Arrestees under Federal Consideration (Not Allowing Overlap).

Consistent with the expectations of the PSN initiative, the prior record of those considered for review was substantially more serious than the records of those arrestees available from local criminal justice databases. The gap between the felony requirement and what the local databases indicate likely reflects that the federal prosecutors had a larger array of prior history data upon which to draw, since a felony conviction was a requirement for federal prosecution for CCW cases as Felon in Possession cases.

The small number of cases upon which scrutiny and processing was directed, again, reflects the idea of concentrating resources and efforts on the highest risk individuals. Here the comparison indicates that this was statistically verified as an element of the process. Similarly the impact of the program on the population of offenders in the local database appears to have removed them via dismissals from processing in the local courts.

Below a comparison between the 2006 and 2007 cohorts is executed to revisit the question of how the larger population of CCW arrestees was handled under the change. Were a greater proportion sent to prison? Did a greater number of arrests yield charges? These and related questions direct attention to systemic changes that may have operated contemporaneously with reviews, inasmuch as the CCW cases may have received a greater level of overall attention, beyond the Federal consideration directed at the 33 individuals discussed above.

Comparing Outcomes: 2006 CCW Arrests and 2007 PSN CCW Reviewed Arrests

Charges Filed. Arrestees subjected to PSN CCW reviews were significantly more likely to have their charges filed in court, while the comparison group of 2006 CCW arrestees were more likely to have their charges dropped (from Table 15). This is consistent with greater scrutiny of cases for consideration in 2007.

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Table 15: Comparison of Charges Filed and Dropped.

	Charges Filed	Charges Dropped	Total
2006 Arrestees	286 (46%)	338 (54%)	624
2007 Arrestees	344 (59%)	238 (41%)	582

*differences are statistically dependable, p<.05

Dispositions.   There are significant differences between arrestees subjected to PSN CCW reviews and the comparison group of 2006 CCW arrestees in the proportion of arrestees who pled guilty, were found guilty by jury trial, and those whose disposition is pending. A higher proportion of 2006 CCW arrestees pled guilty (65%) or were found guilty by jury trial (6%). A much higher proportion of PSN CCW reviewed arrestees are awaiting a case disposition (34%), relative to the comparison group of 2006 CCW arrestees (4%). There were no significant differences for the remaining case dispositions (from Table 16).

Table 16: Comparison of Dispositions.

	2006 Arrestees with Charges Filed (n=286)	2007 Arrestees with Charges Filed (n=344)
Pled Guilty*	65%	42%
Pled No Contest	1%	1%
Jury Trial – Guilty*	6%	3%
Bench Trial - Guilty	2%	3%
Jury Trial – Not Guilty	2%	1%
Bench Trial – Not Guilty	1%	1%
Suspended	<1%	0
Disposition Pending*	4%	34%
Dismissed	18%	15%

*differences are statistically dependable, p<.05.

Table 17 provides a comparison of sentence types after removing the missing and/or pending sentence information category from the overall sample. With the exception of fines, there are no significant differences in sentence types between arrestees subjected to PSN CCW reviews and the comparison group of 2006 CCW arrestees. The missing and/or pending sentence information which is large in the 2007 cohort, is associated with federal consideration, so the exclusion create an issue of comparability if the most serious offenders are removed. With that caution in mind, based on this observation, the only difference between the two groups processing appears in relation to fines. A higher proportion of 2006 CCW arrestees received a fine (9%), relative to arrestees subjected to PSN CCW reviews.

There were no significant differences between the two groups with regard to the average sentence length for prison sentences, jail sentences, and probation sentences. Additionally, there were no significant differences in terms of the average fine amount. While the comparison group seems to have a higher proportion of arrestees who received a fine as a sentence, the average fine was approximately the same for both groups (from Table 18).

Once the missing and/or pending sentence information category was excluded, the only significant difference between the two groups is the proportion of arrestees receiving a fine as a sentence (from Table 19). Analyses not shown indicate further that there were no significant differences between the two groups with regard to the average sentence length or fine amount.

Table 17: Comparison of Sentence Types with Removal of Missing/Pending.

	2006 Arrestees with Charges Filed (n=190)	2007 Arrestees with Charges Filed (n=114)
Prison	15%	17%
Prison Plus Probation	1%	0
Prison Plus Fine	13%	15%
Prison Probation Fine	1%	1%
Jail	3%	3%
Jail Plus Probation	<1%	1%
Jail Plus Fine	5%	9%
Jail Probation Fine	3%	4%
Probation	7%	4%
Probation Plus Fine	42%	44%

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Fine*	9%	1%

*differences between groups are statistically dependable, p<.05.

Table 18: Comparison of Sentences by Sentence Type (Allowing Overlap in Sentences).

	2006 Arrestees with Charges Filed		2007 Arrestees with Charges Filed	
	N	Mean (sd)	N	Mean (sd)
Prison sentence				
Lower yrs	58	2.72 (3.88)	38	2.69 (2.37)
Upper yrs	58	3.99 (7.92)	38	4.84 (5.36)
Mean yrs	58	3.35 (5.77)	38	3.77 (3.65)
Jail Sentence				
Days	21	79.90 (69.43)	20	104.50 (79.65)
Probation sentence				
Years	103	1.58 (.76)	62	1.52 (.69)
Fine				
Amount	140	$737.09 (265.17)	84	$796.61 (464.91)

Table 19: Comparison of Sentence Types (By Most Serious Sentence) with Removal of Missing/Pending.

	2006 Arrestees with Charges Filed (n=190)	2007 Arrestees with Charges Filed (n=114)
Prison	30%	33%
Jail	11%	17%

Probation	49%	48%
Fine*	9%	1%

*differences between groups are statistically dependable, p<.05.

Conclusions

Implementation failure and net widening are two issues that have beguiled criminal justice interventions. Programs that are aimed at particularly serious offenders often ensnare less serious offenders and "widen the net". A larger idea associated with policy initiatives is implementation failure, which could have many sources such as not following through on required program elements, in this case sanctions. For example, mandatory arrest policies, when carefully scrutinized, routinely indicate adherence to the policy has substantial slippage, even under experimental conditions (e.g., Sherman and Berk, 1981).

This chapter has provided an empirical examination of the processing in the NWD during the time the working group was most active in reviewing cases for PSN processing at the federal level. Did the processing of CCWs change significantly during this period and result in a substantially wider net? The comparison of 2006 and 2007 CCW arrestees indicated that the probability of charges being filed did substantially rise across the two years. Formal charges were pursued in 46% of cases in 2006 and that rose to 59% of cases in 2007 most likely due to the attention that CCWs received during this period and the close working relationship between the police and prosecutors on a case by case basis. This outcome might suggest net widening occurred at this point, but the analysis of case processing routines once charges were filed indicate that sentencing outcomes for individuals as an overall cohort were little changed. This suggests that the system worked on the modal CCW cases in a comparable fashion across the two periods.

With respect to the implementation of the program, a prior section of this report has detailed the functioning of the working group. In this chapter we have detailed the relative rarity (33 of 582) of federal consideration for an individual and the seriousness of the prior record of the individuals who received this consideration relative to their CCW arrestee peers. This is an indication of a rigor of review, consistent with the goal of identifying (at least with regard to prior record) serious offenders.

This chapter has provided a quantification of what has happened to the general population of CCW arrestees over two periods. The next question to consider is, did the change in processing detailed here and in previous sections of this report yield a decline in gun violence during the observed period of higher attention to CCW cases?

It seems plausible to consider two mechanisms which may have been at work. First, a general (and specific for those caught, punished, but in the community) deterrent effect may have been communicated to those who would carry guns. Dissuading some potential illegal gun carriers from engaging in this activity should yield a decline in gun violence as opportunities are reduced. A second potential mechanism to consider is whether gun violence was reduced by incapacitation. If the individuals given federal consideration represent a particularly active and serious offender pool, their removal from the NWD could also result in a detectable decline in gun violence. Discerning the deterrent and incapacitation effects is not possible, but both predict a decline in crime if the program was successful identifying, apprehending, and prosecuting serious offenders and communicating that message broadly to the pool of citizens who carry illegal firearms in the NWD. This question is addressed as we study the impact of the PSN working group on crime in the next chapter.

Chapter 3: The effect of gun violence reduction efforts on gun violence

The effectiveness of criminal justice innovations is often questionable. For example, there is a fair debate about the impact of community oriented policing on crime (Worrall/Zhang debate). Disentangling the effectiveness of programs and gauging their outcome relative to other actions is an essential part of criminal justice research. The preceding chapters have documented a gun-offender approach that was implemented in Detroit, MI for slightly less than one year. The implementation of a new processing routine for gun offenses, including collaborative investigations, using federal prosecution of felons with guns as a possibility and having corrections supervision augmented for gun offenders on parole in the Northwest District were all part of the effort. Whether those objectives were met has been established in previous chapters, and case processing routines changed over time and parolees were subjected to greater scrutiny.

Nevertheless, if criminal justice agencies do effectively change their routines, even if it is transitory and not permanent, one of the important questions is: Did the change affect public safety? In this instance greater scrutiny of gun parolees and greater attention to those carrying guns in the Northwest district would be expected to have a net negative effect on gun violence in that geographic area. There is little reason to believe that the effect would extend far beyond the Northwest district. As such this chapter takes up the question: What impact, if any, did the PSN project have on gun violence?

Measuring gun violence

Detroit's six districts recorded non-fatal shootings and homicides in a database which captured the district in which each shooting or homicide occurred. Data were recorded for each gunshot victim in a consistent format from January 1, 2006 through the week of March 23, 2008. Those data were filtered by date and location to create a weekly total of shooting victimizations

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in each of the six districts. Since the Eastern district, which has a history of high levels of gun violence, adopted a PSN-like program during portions of the observation periods, it is excluded as a control site. The gun-focused projected was adopted partially during the Northwest District intervention period and continued into the post-intervention period. As such, the Eastern district was excluded from the analyses below. It should be noted, that, in separate analyses of the Eastern District, there was a detectable and marginally significant decline in the number of shootings in that district. Since the project did not closely follow the implementation of the gun violence reduction effort there, it is difficult to pinpoint the commencement and cessation of that intervention. Therefore we chose to exclude it analyses presented here, since it was not a pure control site and the intervention period was not well defined.

A total of 117 weekly observations were recorded for each district. Thirty-nine weeks in the period from   October 1, 2006- June 30, 2007 represent the intervention period, where processing routines changed significantly in the Northwest District. The 39 weeks from January 1, 2006 through the week of September 24, 2006 represent observations prior to the PSN intervention.   The period from July 1, 2007 to March 23, 2008 represents 39 post PSN observations.

Thus there are three periods for the study, a pre-intervention, intervention, and post-intervention period. Given the three periods we approach the PSN intervention's effect on shootings in several ways. First, simple descriptive help describe the mean levels of gun violence in the intervention and four non-intervention districts during the entire period. Second, t-tests comparing the means across periods for each district offer an initial examination about whether there are significant differences in the Northwest District and whether there were other declines that coincide with the Northwest District changes. Finally, we run a series of Auto-

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Regressive Moving Average (ARIMA) models to ensure that trends in the data are not distorting the statistical inferences drawn regarding the impact of the PSN project in the Northwest District.

Fatal and Non-Fatal Shootings a Descriptive Analysis

The data in table 20 indicate that the Northwest district had the highest mean level of weekly shooting victims during the 117 weeks, at 6.15 per week. The West and Southwest districts had the next highest levels of shootings with means of 5.91 and 5.18 respectively. The Northeast district had a mean level of 4.64 weekly shootings, and the Central district had the lowest mean level of weekly shootings with a 2.29 average. The level of gun violence in Northwest District is quite distinct inasmuch as, during the 117 weeks of observation there were *no weeks with zero shootings*. All other districts exhibited weeks with no shootings, though only the Central district had more than 5 weeks out of the 117 with no recorded shootings.

Table 20: Full sample statistics for five districts weekly shootings (N=117)

	Minimum	Maximum	Mean	Std. Deviation
Northwest	1	17	6.15	2.97
Central	0	9	2.29	1.88
West	0	16	5.91	3.45
Southwest	0	14	5.18	2.98
Northeast	0	13	4.64	2.86

The data presented in table 21 subdivide the weekly mean shooting levels into the three periods under study, that is the pre-PSN period, the PSN intervention period, and the post-PSN period. These three periods offer contrasts in terms of the levels of shootings and gun homicides recorded across all five Detroit districts. The Northwest district, where the PSN project was

implemented, experienced a reduction of more about 1.4 shooting victimizations per week for the 39 weeks during the intervention, when compared with the pre-intervention period. More simply, in the 39 intervention weeks there were about 156 fewer shooting victims than in the preceding 39 week period. When compared with the 39 weeks after PSN activities wound down in the district, we observe that the intervention period had approximately .6 shooting victimizations fewer than the post-PSN comparison period. Thus in terms of victimization differences between those two periods, we observe about 24 less shootings in the intervention period when compared with the 39 week post intervention period.   By comparison, the other precincts examined as controls appear to have trended downward across all three periods. This pattern makes it difficult to discern whether an overall city-wide trend of decline was at work, or if the PSN intervention had a unique and distinguishable effect in the Northwest district. Below, a series of t-tests explore whether weekly mean-levels had statistically significant variation across the observed periods.

Table 21: Weekly Descriptive Statistics for Pre, Intervention, and Post Observations Series

	Pre-PSN (N=39)				PSN Intervention (N=39)				Post-PSN (N=39)			
	Min	Max	Mean	Std. Dev	Min	Max	Mean	Std. Dev	Min	Max	Mean	Std. Dev
Northwest	2	17	6.87	3.04	1	11	5.46	2.59	2	14	6.10	3.15
Central	0	9	2.51	1.92	0	8	2.44	2.02	0	6	1.92	1.69
West	1	13	6.33	3.31	0	16	5.72	3.51	0	15	5.67	3.56
Southwest	1	13	5.67	3.17	1	11	5.28	2.70	0	14	4.59	3.02
Northeast	1	13	5.79	3.21	0	12	4.15	2.47	0	11	3.97	2.56

Consistent with the patterns observed in the descriptive statistics, a series of t-tests, reported in table 23, confirm that the decline in fatal and non-fatal gun victimizations was statistically significant ($p<.05$) in the Northwest district. Declines occurred across all four control areas as well, however, only the Northeast district experienced a statistically significant decline among the control areas. The increase in gunshot woundings and gun homicides in the post-PSN period, which occurred in the Northwest District, is unique, as the other four areas continued on a general downward trend. Such a return to pre-intervention levels is consistent with Sherman (1990) and other's speculation about the nature of intense police efforts that are consistent with crackdowns (e.g., Smith, 2003). However, in this case, the processing routine adopted by PSN was much more individual and gun violence focused, but the analogy to a crackdown and the eventual decay back to pre-intervention levels is consistent with these preliminary results. The explanation for the decline in the Northeast district is not clear.

Table 23: T-test comparisons across periods

District	Pre-PSN / PSN Intervention Comparison T-test[a]	PSN Intervention /Post-PSN Comparison T-test
Northwest	2.21 (-1.41)	-.981 (+.64)
Central	.17 (-.07)	1.21 (-.51)
West	.80 (-.61)	.06(-.05)
Southwest	.58 (-.38)	1.07 (-.69)
Northeast	2.53 (-1.64)	.32(-.75)

[a] Obtained t-test value reported, mean difference in parentheses

A thorough exploration of the effect of the PSN effort on crime in the Northwest district must take into account the fact that the data represent a sequence of time-series of observations. Time-series data require special care, as autocorrelated errors, that is the lack of independence across observations over time, may lead one to erroneous statistical inferences regarding the changes in gun violence observed across the three periods. To accommodate the possibility of autocorrelated errors, the use of Auto-Regressive, Integrated, Moving Average (ARIMA) models is suggested for the study of interventions such as those observed in this analysis.

Since the analyses deal with data arrayed over time, this technique must be used to control for variation that is systematically embedded in the series, to ensure that inferences are accurate. This essentially requires the fitting of a statistical model to the data in order to control for the systematic variation inherent in much time series data. To accomplish this the Identification, Estimation, and Diagnosis process outlined by McCleary and Hay (1980:91-103; See also, Box and Jenkins, 1976) will be adopted to pre-whiten the series for analysis and determine whether the intervention was associated with a significant decline in shooting victimization during the period when the project was actively being worked on by the program participants.

The Identification process associated with ARIMA analyses establishes what, if any, trend pattern such as a moving average or autoregressive component must be included in the model to address systematic components of the observations that are associated with time-components. Once a model has been identified it is possible to turn the time series into the necessary "white noise" model that is suitable for analyses.

The intervention component used in a time series can represent several different types of changes, abrupt permanent change, temporary change, and gradual changes in a series are possible. An abrupt and permanent change, for example, might be associated with an on-going intervention that covers a time series from a particular point all the way until the last observation. In the present case, 39 pre-intervention, 39 intervention, and 39 post-intervention weeks are observed. Given this set up we have a switching pattern of no intervention, treatment/intervention, and no intervention. Thus it is expected that we should, theoretically, observe an abrupt but temporary change in the gun violence patterns in the Northwest Detroit area.

To model this, a dummy variable, coded 0 for no intervention active, and 1 for weekly observations that occur during the PSN intervention, is necessary to capture the differences in mean levels of violence between the PSN and non-PSN periods. The logic behind this coding is illustrated in figure 1 below. If the PSN period, net of systematic time-series components, has a significant impact on crime, we would expect that the sign to be associated with the dummy variable capturing the intervention to be negative. Given that there is a directional hypothesis, we will use a one-tailed test of statistical significance in discern whether the decline in shootings is significantly different from zero during the intervention period in the Northwest District. All other comparisons estimated on control districts will be two-tailed tests.

Figure 1. Coding pattern for intervention analysis.

|----------PRE- PSN --------------|------------- PSN ----------------| ---------------Post PSN ---------------|

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The first step in analysis is to examine autocorrelation functions (ACFs) and compare decay patterns in those functions with those typically associated with moving average components and autocorrelation components in the ARIMA model. More simply, a prior realization of the series may have an immediate and quickly dying out impact on the next observation, which would denote a moving average component must be included. Alternatively, one may see an immediate and slowly decaying relationship between successive observations in the series, which is an indicator of auto-regressive components at work. Once these systematic components have been removed from the series, estimation can proceed and the impact of the policy change can be estimated. If a series contains no systematic component, then OLS regression with the dummy variable indicator is an adequate approach to specifying the magnitude and significance of the impact obtained during the intervention period. Since the data are arrayed in a weekly format, ACFs were computed for 52 weeks to explore patterns in the lag structure. ACFs are for the initial identification step are in the chapter appendix. A summary of intervention analyses for the six districts are presented in table 24.

Table 24: Intervention Analysis for PSN, N=117 weekly observations of Fatal and non-Fatal Gunshot wounds

District	Model / significance of fit	PSN Intervention effect (Z/t statistic)	Lower Bound	Upper Bound	Augmented Dickey-Fuller
Northwest	ARIMA, MA(3) p=.06	-0.981 (-1.36)	-2.39	0.42	-10.52
Northwest	OLS p=.07	-1.02 (-1.78)*	-2.17	0.12	--
Central	OLS p=.56	0.22 (0.59)	-.52	0.95	-10.22
West	OLS p=.68	-0.28 (-0.42)	-1.62	1.06	-9.52
Southwest	ARIMA, AR(3) p=.14	0.37 (0.52)	-1.03	1.78	-9.08
Northeast	ARIMA, AR(11) p=.03	-0.70 (-1.02)	-2.05	0.64	-9.34

*p< .05, one-tailed test

Since the Northwest district change is of primary concern we modeled the intervention using ARIMA and Ordinary Least Squares (OLS) regression models. This approach accounted for the fact that the ARIMA component was not statistically significant in the ARIMA model, but suggested by the diagnosis of the series and its autocorrelation function. The differences between the models' estimated intervention effects are not large, but both are presented for consideration. The PSN intervention had a negative and marginally significant impact on weekly gunshot victimizations in the Northwest District. For the 39 week period, ARIMA and OLS models indicate a reduction of approximately 1 shooting per week. The models fit as measured by F-statistics (OLS) and chi-square statistics (ARIMA) indicates that the overall models did not meet conventional standards for statistical fit (.05), but would be within more a more liberal

definition of statistical significance. For example, if we consider only the OLS estimate for the intervention, we find a t=-1.78, given a one-tailed statistical test, we would find the coefficient associated with the effect to be within the bounds of conventional statistical significance. Nevertheless, the weakness of the model fit should not be overestimated. The estimation of changes in four other districts allows for the effect to be contextualized. In no other district is an effect obtained that is even marginally significant. In both the Central and Southwest districts, the gunshot victimizations increased slightly during the 39 week intervention period (by .22 and .37 shootings per week, respectively). In the Northeast and West districts, declines in shootings were observed during the 39 weeks (.70 and .28 shootings per week declines, respectively). Again, none of the control districts experienced statistically significant changes in gunshot victimizations. The model for the Northeast was significant (p=.03), but that was largely due to the ARIMA component estimated and not the intervention coefficient. The coefficient of -.70 for the Northeast comes closest to that estimated for the Northwest district (-.98).

The conclusion that can be drawn, cautiously, from the preceding analyses is that the PSN gun intervention, observed for 39 weeks, had a small, but significant effect in reducing gun violence in that location. There is no clear pattern of contemporaneous change in the other four districts. This suggests that there was a decline in gunshot victimization in the Northwest during the period when the PSN project was most active in intercepting guns on the street and local and federal agencies were working together on case reviews. Given the immense costs of gun victimizations in terms of medical, economic, and psychological costs a reduction of one event per week would yield an overall reduction of approximately 39 cases during the period or, 52 per year if the program were sustained and had a constant and similar impact. For example, if we draw on Cook and colleagues estimate that medical costs for a gunshot victimization is $17,000

(these estimates are more than a decade old and are not adjusted for inflation) the we would estimate medical treatment cost savings of $663,000 for the 39 weeks and if the program were to continue, sustained for one year, it would yield $884,000 reduction in medical costs. Again, these numbers are based on an old estimate of costs and are probably a floor of "savings" that could be identified.

The problem of sustaining and maintaining the intensity of interventions is clearly an issue, but in a time of shrinking public budgets and local police force personnel cuts, the findings from Detroit are more generalizable, since that city has been in economic difficultly throughout the study period.

Chapter 4: Conclusions

The conclusions that can be drawn from this analysis and report are quite tentative. First, the implementation of a rigorous and real change to the criminal justice processing in Detroit appears to have had a very short duration and the intensity of case processing appears to have been limited as well. Similarly, data drawn from parole points to, again, a change in processing, but the measures that correspond to that change appear to have a longer duration, but very low and perhaps no intensity from the records drawn from the Department of Corrections. Given these observations, it would be surprising to find a substantial programmatic impact on gun violence in the Northwest District of Detroit. The evidence points to a small reduction, but the high gun crime East district also experienced a substantial reduction with no such change in routine processing.

What can be made of the findings? First, they are disheartening in the sense that program implementation in a criminal justice system undergoing financial stress, unstable leadership, and substantial personnel transfers and attrition is quite difficult. Such an environment, unfortunately, is likely to characterize many police agencies in the coming years as attrition and layoffs threaten organizational stability. In the context of this organizational instability, only a brief intervention was detectable from onsite observations and from data collection and analysis efforts. However, this short and limited change in processing coincided with a significant decrease in shootings in the intervention area.

While this is a promising result for such interventions, it should be noted that another similar district not involved in this initiative experienced a decline in gun violence during the period of study. It is not known if this could have been related to the intervention through a

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spillover effect (although the areas were not adjacent) or if it was a part of the routine fluctuation in gun violence. The potential impact on gun crime through such an intervention may be best realized if such interventions can be implemented and maintained in a consistent manner with a sufficient level of intensity to make a difference.

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