INDIANAPOLIS
CRIME GUN INTELLIGENCE CENTER

DISRUPTING THE CYCLE OF VIOLENCE IN OUR COMMUNITY

FINAL REPORT

Written by

Natalie Hipple, PhD
Department of Criminal Justice
Indiana University, Bloomington

ACKNOWLEDGMENTS

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INTRODUCTION

The Indianapolis Metropolitan Police Department (IMPD) received its Crime Gun Intelligence Center Grant in the Fall of 2018. Nationally, many different approaches to Crime Gun Intelligence Centers (CGIC) exist. As part of their grant application, the IMPD proposed a de-centralized approach to their CGIC—the most common approach. At that time, ATF had CGIC personnel assigned to the ATF Indianapolis Field Office who worked with their peers in the Columbus Field Division (CFD) CGIC, as well as the ATF agents and task force officers in Indianapolis. The CFD CGIC has an Industry Operations Intelligence Specialist, an Intelligence Research Specialist, and a National Guard Analyst who all worked in the ATF Indianapolis Field Office to investigate gun crimes in Indianapolis. Although not physically located in Indianapolis, local ATF staff have access to the many resources of the Columbus CGIC.

The de-centralized approach to investigating gun crimes begins at the time a firearm is recovered in the field—through the IMPD/ATF Save-a-Cop program. This program utilizes IMPD patrol officers who volunteer to become an ATF firearms liaison officer. This program is currently in place throughout the city of Indianapolis and is built upon the willingness of patrol officers to volunteer for this extra responsibility. The ATF firearms liaison officers are trained on techniques such as triaging a scene, interviewing, photography, processing a recovered firearm in the field for DNA, and latent prints. The processing of a firearm for DNA and prints in the field eliminate the need for that firearm to be processed through the Crime Lab, thus ensuring a timelier submission for NIBIN. Through the proposed grant activities, ATF and IMPD planned to build upon this successful model to better investigate and prosecute gun crimes. However, after the grant was awarded, IMPD decided it would try something different—a centralized approach through co-location of CGIC partners, thus creating the Indianapolis Crime Gun Intelligence Center, or the Indy CGIC.

VIOLENT CRIME IN INDIANAPOLIS

Indianapolis, Indiana is known as the Crossroads of America, the Amateur Sports Capital of the World, and one of the busiest convention cities in the nation. The City of Indianapolis covers an area of about 360 square miles. In 2020, it was the 15th most populous city in the U.S., with an estimated population of 878,000. The population is 57.7% white, 28.8% black, and 3.9% Asian. Fewer than one percent of the population identifies as American Indian or Alaska Native or Native Hawaiian or Pacific Islander and 10.8% identify as Hispanic or Latinx origin.[1] Indianapolis is proud to be recognized as the home of the Indianapolis 500, Super Bowl XLVI, the Brickyard 400, the NCAA Final Four, and numerous other events that draw well over 250,000 visitors per

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[1] https://www.census.gov/quickfacts/fact/table/indianapoliscitybalanceindiana/PST040222#PST040222

event. While these events spotlight the many assets of the Hoosier state and Central Indiana, Indianapolis is also suffering from a public safety crisis. The homicide rate in Indianapolis is consistently higher than the national average, with between 17 and 18 homicides per 100,000 people since 2015, increasing significantly in 2020 to 24 homicides per 100,000 people. By contrast, the national average has hovered at around five homicides per 100,000 people since 2015 (Federal Bureau of Investigation, 2019).

The City of Indianapolis consistently experiences more than 400 nonfatal shooting incidents each year, occurring at a rate of more than one firearm violence assault victim each day (IMPD Shooting Database) or 47 per 100,000 population each year. In Indianapolis, nonfatal shooting victims are almost 4 times more frequent than gun-related homicide victims. In 2020, there were 639 nonfatal shooting victims and 180 gun homicide victims.

Last year (2021) was the deadliest year on record for Indianapolis with 249 criminal homicides, an increase from 214 in 2020. In 2018, 1,160 firearms were reported stolen while IMPD seized 3,792 firearms. The Marion County Public Health Department has officially noted homicide as a public health concern. Additionally, nonfatal shootings incidents show a similar trend, increasing from 436 in 2017 to 678 in 2021 (see Figure 1). Indianapolis public safety leaders remain concerned because, while the rest of the nation's homicide and violent crime rates are trending downward, Indianapolis is not following this trend, rather remaining steady or increasing in many violent crime categories.

Figure 1: Total gun homicide and nonfatal shooting incident by year and type
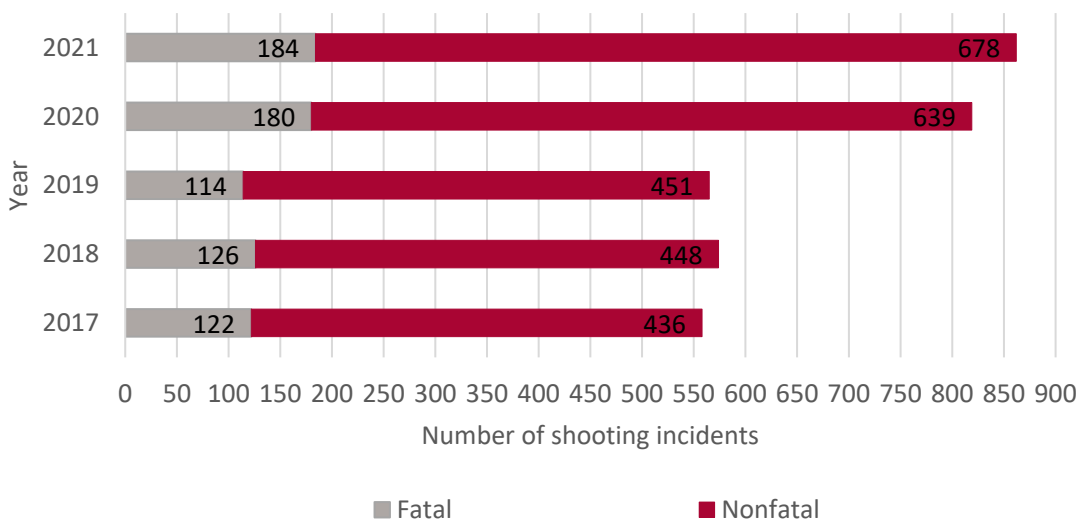
IMPD—the largest law enforcement agency in the State of Indiana—is authorized to employ 1743 sworn officers. However, like most law enforcement agencies across the nation, they have not been fully staffed with sworn officers for many years. Additionally, for the past five years, the Marion County Prosecutor's Office (MCPO) has also been understaffed, requiring staff to do more with less. Some deputy prosecutors in the office carry a caseload of greater than 200 cases. While the crime rate has increased, there are few additional resources to prosecute criminals.

CGIC APPROACH

The goal of the Indy CGIC is to disrupt gun violence through the consistent production of timely, precise, and actionable intelligence. In an effort to provide valuable intelligence for investigations, law enforcement resources focus on the most violent connected firearm offenders. These offenders are identified through a data-driven and forensics-led initiative in efforts to identify, target, investigate, arrest, and ultimately prosecute them.

CGIC INITIATIVE

The Indy CGIC developed the following mission statement:

> The Indianapolis Crime Gun Intelligence Center (Indy CGIC) is an interagency collaboration focused on the immediate collection, management, and analysis of crime gun evidence. The Indy CGIC will identify linked criminal shooting events, investigate and identify repeat shooters, and build strong criminal cases against repeat shooters by using the National Integrated Ballistic Information Network (NIBIN) to identify shell casings and firearms from related crime scenes. The Indy CGIC will rely heavily upon the Save-A-Cop firearms liaison program to ensure comprehensive forensic evidence recovery from firearms, ballistics, and shell casings at crime scenes to strengthen firearms prosecutions. The Indy CGIC will partner with other crime reduction initiatives such as the Indianapolis Violence Reduction Partnership (IVRP) to leverage additional resources. These investigations will result in the arrest and prosecution of repeat shooters, thereby disrupting the gun violence cycle, and ultimately reducing violent gun crime in Indianapolis.

> Indy CGIC is a collaboration between the Indianapolis Metropolitan Police Department, ATF, the Marion County Forensic Services Agency, the U.S. Attorney's Office (USAO) for the Southern District of Indiana, the Marion County Prosecutor's Office (MCPO), and our research partner Indiana University.

This initiative has three major components: (1) dedicated staffing assigned to investigating NIBIN and gun crimes; (2) centralized collaboration with ATF, the USAO, the MCPO, and the Crime Lab (Indianapolis-Marion County Forensic Services Agency); and (3) NIBIN training of law enforcement and prosecution staff.

Objective 1: IMPD will provide dedicated staffing assigned to investigate NIBIN crimes.

Providing dedicated staffing allows for greater efficiency by assigning three dedicated IMPD crime analysts to the investigation of gun crimes. These crime analysts work in conjunction with ATF Columbus Field Division (CFD) CGIC personnel, the HIDTA-sponsored IMPD NIBIN technician, ATF special agents, and task force officers. Specifically, the crime analysts will:

- Coordinate NIBIN leads: The crime analysts, in collaboration with ATF CGIC staff, are responsible for organizing NIBIN leads and ensuring the evidence is shared with the appropriate law enforcement and prosecution staff. Once the evidence produces a NIBIN lead, crime analysts compare the lead to evidence in already existing databases so that any links with other crimes are established. Once a detailed analysis is complete, the analysts share information with the designated IMPD district officers, detectives, ATF agents and task force officers, and prosecution staff.
- Follow-up with eTrace leads: IMPD currently utilizes eTrace for all firearms recovered in Indianapolis/Marion County. To adequately follow-up with the number of leads resulting from eTrace, crime analysts share these investigative leads with the appropriate law enforcement and prosecution staff.
- Provide liaison functions: The analysts act as liaisons to IMPD investigators, ATF agents and task force officers, and MCPO deputy prosecutors, ensuring much needed support for long-term investigations of gun crimes.
- Create intelligence and officer safety bulletins to disseminate department wide for awareness and possible intelligence development.
- Create feedback letters to street officers about resulting NIBIN leads.

Objective 2: IMPD will form a centralized CGIC.

In January 2019, the Indy CGIC co-located in the IMPD's Regional Operations Center (ROC), Emergency Operations Center (EOC), bringing ATF, IMPD and MCPO staff under one roof. This co-location fosters constant collaboration and cooperation. The EOC, which houses the Indy CGIC, also houses part of the IMPD's Incident Analysis Center

(IAC). The presence of the IAC broadens collaboration between the Indy CGIC and the Operations and Investigations Divisions of IMPD.

Grant partners contribute the following resources.

- ATF: The ATF assigned one group supervisor, five special agents, four task force officers (from IMPD), one Intelligence Research Specialist, and one Industry Operations Intelligence Specialist, one agent and one task force officer to each of IMPD's six districts. The ATF staff acts as liaisons and provides investigative support to the IMPD district investigators and officers, Crime Lab employees, USAO, and MCPO. ATF staff review all NIBIN Leads and maintain a database for ongoing investigations. In addition to ATF personnel assigned to the ATF Indianapolis Field Office, ATF relies on the resources available to them through the ATF CFD CGIC personnel assigned in Indianapolis, as well as additional resources available from CFD CGIC.
- IMPD: IMPD provides the physical space for the Indy CGIC. Each IMPD district designated one district detective to investigate gun crimes. The detectives liaise to the Indy CGIC for their unit. They serve as the points of contact for shots fired and gun cases, provide follow-up investigations on NIBIN leads, and communicate with local, state, and federal authorities to ensure successful investigations and prosecutions. IMPD will continue with the Save a Cop program through ongoing recruitment and training of officers who volunteer for the program to ensure coverage across all shifts and investigative units.
    - The ATF firearms liaison officers are trained on techniques such as triaging a scene, interviewing, photography, processing the recovered firearm in the field for DNA, and latent prints. The processing of a firearm for DNA and prints in the field eliminates the need for that firearm to be processed through the Crime Lab, and thus ensures a timelier submission for NIBIN.
- IMCFSA: The Indianapolis-Marion County Forensic Services Agency (Crime Lab) has a firearms unit that is staffed with one supervisor (who works cases), five firearms examiners, two firearms technicians, and one NIBIN technician, all of whom are dedicated to the timely entry of firearms and related evidence into NIBIN.
- USAO: As part of Project Safe Neighborhoods, the USAO for the Southern District of Indiana assigned one Assistant United States Attorney (AUSA) to each of the six IMPD districts. This AUSA also liaises to the Indy CGIC. The AUSA evaluates

gun cases at the district and, if adopted, either assigns the case to themself or another AUSA. The USAO will seek enhanced prosecution and sentencing for PSN adopted cases.

- MCPO: The prosecutor's office works in conjunction with investigators and the USAO to seek enhanced prosecution and sentencing for those who commit crimes with a firearm. Additionally, MCPO received separate Department of Justice (DOJ) funding to hire a NIBIN prosecutor, dedicated solely to gun crimes, and if funded would complement this initiative.

A signed MOU between ATF, IMPD, and the Crime Lab is on file with ATF for the inclusion of IMPD and the Crime Lab in the ATF NIBIN National Correlation and Training Center (NNCTC). The ATF added IMPD and the Crime Lab IMPD to the NNCTC in June of 2019. At this time the Crime Lab stopped doing correlations.

Objective 3: IMPD will provide training to Indy CGIC staff.

Training is a high priority for all grant partners, as this project involves the hiring of new staff and requires a unique understanding of the various disciplines involved in investigating and prosecuting gun crimes. All partners committed to the four core principles for effective use of NIBIN: (1) comprehensive collection; (2) timely submission; (3) follow-up; and, (4) feedback.

THE CRIME GUN INTELLIGENCE CENTER RESPONSE TO VIOLENT CRIME

It is important to note that the CGIC grant funding was only a small portion of the CGIC effort and the majority of the grant funding was dedicated to hiring civilian analyst staff. IMPD and its partners fully committed to a change in the way they approach gun crime and the grant funding was part of the new approach. A small portion of the budget was spent on training and travel and equipment and supplies (see Figure 2).

Research Partner: IMPD has long been committed to action research and often has a research partner involved with their projects. The majority of the research funds supported the documenting and weekly reporting of nonfatal shootings in Marion County. IMPD is unable to extract these data from their Records Management System therefore, in collaboration with their research partner, developed a system for collecting and reporting these data. The process is labor intensive and involved an undergraduate research assistant in addition to the research partner.

The research partner funds were also used to support two graduate research assistants who spend the majority of their effort collecting data from NIBIN lead reports and the accompanying police incident reports.

Figure 2. Spending Profile

Budget

- Analyst Salary & Fringe: 78%
- Research Partner: 20%
- Training/Travel: 1%
- Equipment/Supplies: 1%
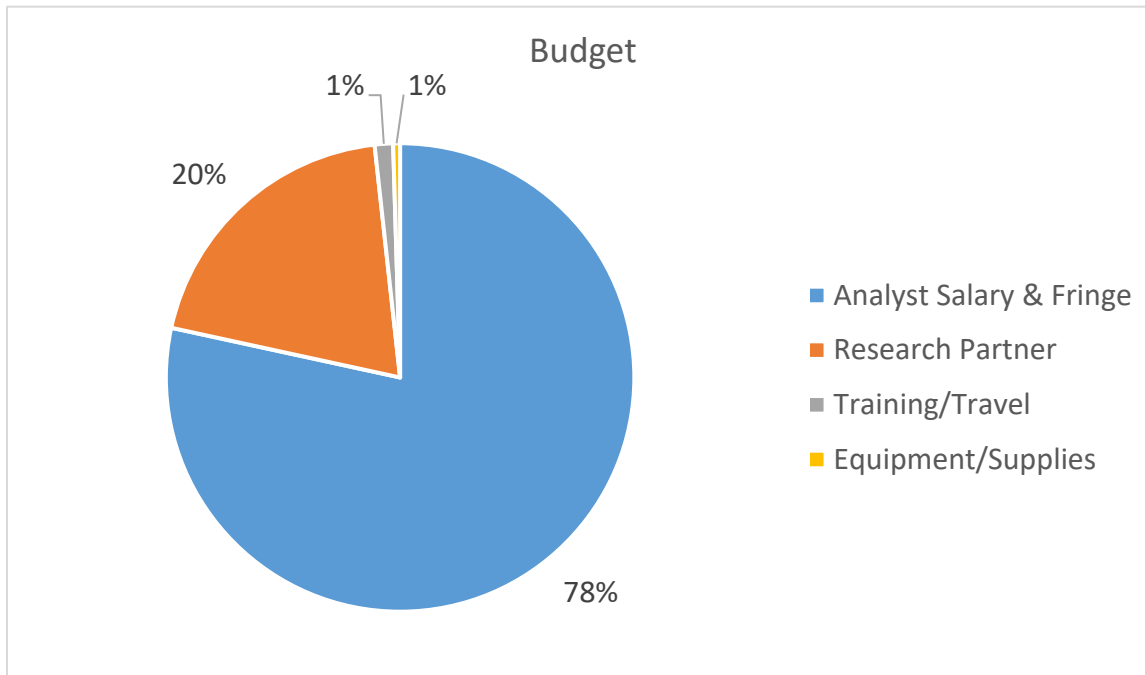
CGIC IN INDIANAPOLIS

The Indy CGIC is unique in that they fully committed to co-locating all their partners in one location. They selected the IMPD Regional Operations Center (201 N. Shadeland Avenue) Indianapolis in December 2018 because there was space there for everyone to be stationed in one large room. The Indy CGIC became fully operational on January 1, 2019. On this date, those co-located included: ATF (Group Supervisor, five ATF agents, and two ATF analysts), IMPD (four uniform patrol officers, four Task Force Officers, and one sergeant), a Marion County Deputy Prosecutor (with two analysts), an Assistant United States Attorney, and a Marion County Community Corrections enforcement officer. At this point, there are still a few officer and analyst positions that needed to be filled, but the unit was operational and functional.

IMPD continued to hire and train analysts; they hired two new analysts in April/May of 2019 and another in February of 2020. By September of 2020 there were six analysts and a supervisor. Retention of analysts has proven difficult throughout the grant project. Many

analysts start out at IMPD, get trained, and then leave for hiring paying positions at other agencies, a common phenomenon in the field.

They assigned one analyst to the homicide unit and then assigned others to the districts. Once able, they started assigning analysts to NIBIN leads alongside an investigator to improve accountability and reduce duplication of efforts. IMPD created a Standard Operating Procedure (SOP) for shots fired incidents in August of 2019; however, they had difficulty with NIBIN leads from these cases and how they are being processed and utilized. They anticipated that having an analyst at the district would help with this issue and accountability in that it will give the CGIC someone directly with whom to speak at the districts.

COVID-19 IMPACT

The MCFSA was functioning at full capacity until the COVID-19 pandemic hit. The pandemic forced the MCFSA to shut down temporarily and then function at reduced capacity, only one or two examiners were allowed in the office per day. IMPD went three weeks without the ability to send evidence to the Crime Lab. Meanwhile, shooting incidents were starting to increase after an initial decrease during the first three weeks of the pandemic.

COVID-19 continued to have an impact on resources, violent crime, court closings, and overall CGIC implementation efforts through 2020 and into 2021. It took until April of 2021 for the Crime Lab to catch up completely. However, the courts were still operating at a minimal level at this time.

On July 1, 2021, the Indy CGIC was expanded through new state legislation (HEA 1558) that created the Indiana Crime Guns Task Force (ICGTF). The ICGTF is hosted by IMPD. Funds are appropriated by an Executive Board and currently reimburse salaries for three non-IMPD (i.e., other jurisdiction) officers, three IMPD supervisors, officer overtime, equipment, software, and other related items. Shortly thereafter, detectives from the Avon Police Department, Zionsville Police Department and Carmel Police Department co-located in the current CGIC space joining detective from the Indiana State Police and the Fishers Police Department.

ANALYSIS OF INPUTS AND OUTPUTS

CGIC INTERNAL DATA

The CGIC unit maintains a comprehensive internal database intended to monitor their activity. They use these data to populate a weekly report that generates year-to-date statistics. A detailed Law Enforcement Sensitive version of this report is disseminated internally to local, state, and federal partners (Table 1). There is also a Community Release version of this report

that summarizes year-to-date arrests, firearms seized, and NIBIN information from the Crime Lab.

Table 1: CGIC Internal Activity Metrics

	2019	2020	2021	2022 (06.30.2022)
Seized Recovered Firearm Evidence				
Rifle/shotgun	45	55	40	17
Handgun	209	233	246	134
NIBIN inked Firearm	17	31	31	9
NIBIN linked casing	4	4	1	1
Arrests and Warrants				
State felony outright arrest	121	126	125	102
State misdemeanor outright arrest	63	64	65	56
Federal arrest	67	44	32	12
Felony warrant	59	38	27	26
Misdemeanor warrant	24	12	9	11
State arrest warrant filed	5	18	11	2
Federal arrest warrant filed	64	18	21	2
PSN/Non-CGIC federal case adopted	21	5	4	0
Grand jury indictments	9	20	2	1
Search Warrants				
State device	67	41	41	30
State social media	36	15	11	2
State residence	69	81	53	43
State vehicle	11	25	20	18
State phone records	39	17	4	6
State DNA	11	15	1	1
Federal device	22	26	1	0
Federal social media	6	4	9	1
Federal residence	7	16	4	4
Federal vehicle	2	0	2	0
Federal phone records	3	2	0	0
Federal DNA	0	5	0	0
Seizures				
Cocaine (g)	733	241	574	146
Heroin (g)	114	1,096	381	336
Fentanyl (g)	89	121	219	1,544
Pills (g)	762	462	317	12,166
Methamphetamine (g)	1,662	13,782	6,230	1,399

	2019	2020	2021	2022 (06.30.2022)
Marijuana (g)	12,383	11,614	15,115	28,116
MDMA /ecstasy (g)	0	184	223	1
Spice/synthetic marijuana (g)	127	13,053	58	2,062
Currency (USD)	79,506	330462	213,714	231,709
Vehicles	5	9	7	3
Non-arrest Activity				
Knock and talk	17	2	2	0
Consent to search	17	2	7	1
Confidential informant developed	5	6	4	6
Reports	464	310	189	79
Case agent undercover buy	3	9	1	0
Case agent confidential informant buy	26	32	4	3
Undercover buy by undercover agent	2	0	10	0
Gun liaison work	274	249	198	61
NFS/Homicide contact	118	44	24	8
Call out/Assist	77	26	3	3
Cases adopted by USAO	55	24	8	0
Surveillance operations	76	46	2	0
Interviews	115	84	74	54
Home visits	0	17	10	7

Each entry in the database included the person who was the focus of the activity. As noted in the mission statement, the Indy CGIC is charged with building strong criminal cases against repeat shooters. There were 965 unique suspects in the database from January 1, 2019 through June 30, 2022. Suspect inclusion ranged from one to six times. During this time period, 144 individuals (14.9%) were repeat suspects meaning they were the subject of more than one CGIC activity. Eighteen suspects (1.9%) were included more than two times.

The suspect names included in the CGIC database were also cross-referenced to the Marion County Shooting Database. This internal database contains information on all nonfatal shooting incidents occurring in Marion County as well all homicide incident victims where the victim was killed with a firearm. For each list, the individual's first name, last name, and date of birth[2] were combined to create a unique identifier (e.g., JohnSmith12345). The two lists were then compared to find matches. This matching method is imperfect because it relies on accurate identifier information data entry for both databases, which were populated by different people using a variety of sources. Additionally, only victim information was captured in the shooting

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[2] Excel converts calendar dates into unique numbers using the 1900 date system.

database for the majority of nonfatal shooting incidents, an artifact of the system data source, which means the database lacks a significant number of individuals who were involved but not shot. Therefore, we are confident that any match results are surely an undercount of list overlap.

One hundred forty of the 965 unique suspect names from the CGIC file were matched to names in the Shooting database, a match rate of 14.5%. A match indicates that the CGIC suspect was confirmed as involved in a shooting incident in Marion County from January 1, 2015 through May 31, 2022. Twenty-seven CGIC individuals (19.2% of matches) were matched to more than incident in the Shooting database.

MARS DATA

Data for this section come from the ATF's Monthly Activity Reports (MARS). It is interesting to note that these reports were generally unknown to CGIC leaders until 2021 when a supervisor asked for a specific statistic that was captured in the MARS; however, the Crime Lab has received the reports consistently throughout the duration of the project. The MARS provide a straightforward input measurements of cartridge cases, bullets, and firearm submissions into the Integrated Ballistics Identification System (IBIS). The MARS also provides seizure to acquisition averages and percentages completed within 10 days of seizure along with national averages for comparison. This section focuses on the Crime Lab. Figure 3 displays the combined monthly acquisitions for the Crime Lab for the 13 months prior to the CGIC implementation and the 36 months after implementation. These numbers include recovered bullet cartridges or test fired cartridge cases from a firearm. The Indianapolis Crime Lab did not acquire or enter bullets into NIBIN during this time period. Despite a dramatic decline in combined acquisitions associated with the months following the onset of the global Covid-19 pandemic, the mean number of acquisitions per month increased by 177 after CGIC implementation. A t-test reveals this increase is significant (see Table 2). Figure 4 displays the cumulative acquisitions along with a linear trend line.

Figure 3: Acquisitions per month, December 2017 through December 2021
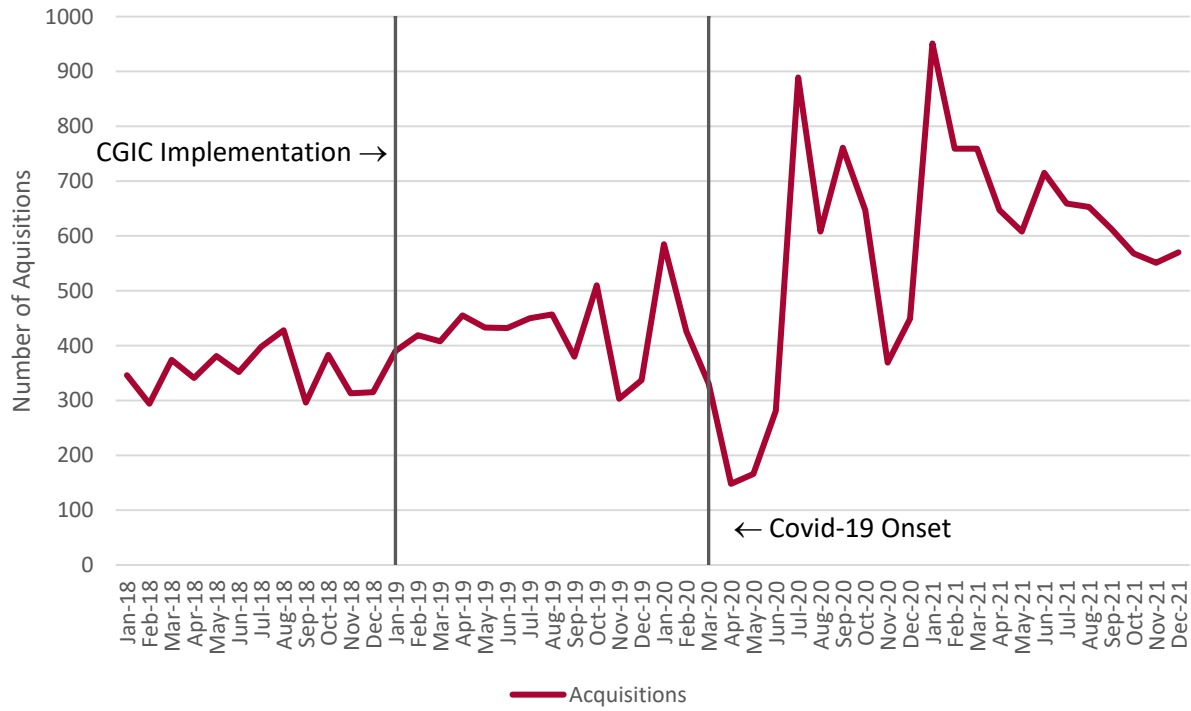
Table 2: Pre- vs. Post-CGIC implementation acquisition means

| | Pre-CGIC | | Post-CGIC | | 2-tailed |
	Mean	Std. Dev	Mean	Std. Dev	t-value *(p)*
Acquisitions	341.92	53.84	519.08	184.95	-3.38 (0.00)
n (months)	13	36	13	36	

Figure 4: Cumulative acquisitions, December 2017 through December 2021
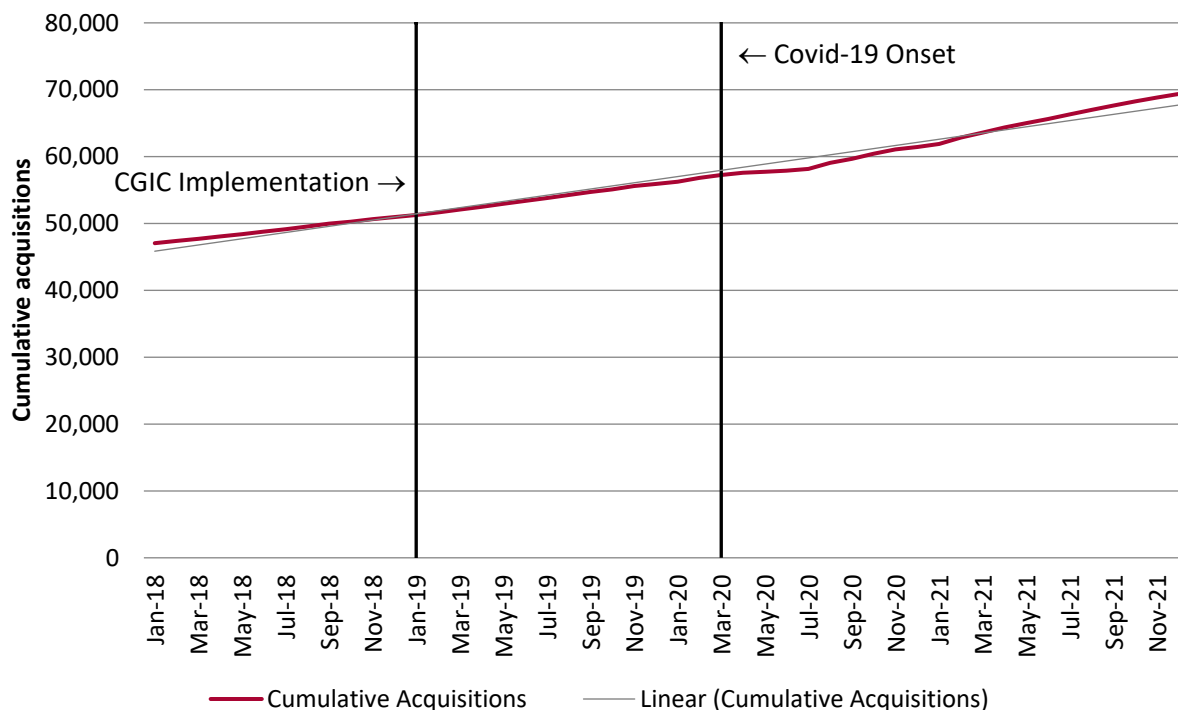
The NIBIN process involves technology that creates a list of comparable images to a submitted piece of evidence. A trained technician then reviews these results and identifies potential links or association from the same firearm known as a "lead." A lead can be generated from one recovered bullet cartridge to another recovered bullet cartridge or from a recovered bullet cartridge to a firearm. "A NIBIN lead is an unconfirmed, potential association between two or more pieces of firearm ballistic evidence and is based on a correlation review of the digital images in the NIBIN database."[3]

Figure 5 displays the number of NIBIN leads generated per month. It also includes historical markers for the CGIC implementation, inclusion as a NIBIN National Correlation and Training Center (Correlation Center) site and the onset of the Covid-19 global pandemic. The mean number of leads generated per month increased by 80 during the post-CGIC implementation period. This change is statistically significant (see Table 3).

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[3] https://www.atf.gov/resource-center/fact-sheet/fact-sheet-national-integrated-ballistic-information-network

Figure 5: Number of leads per month, December 2017 through December 2021
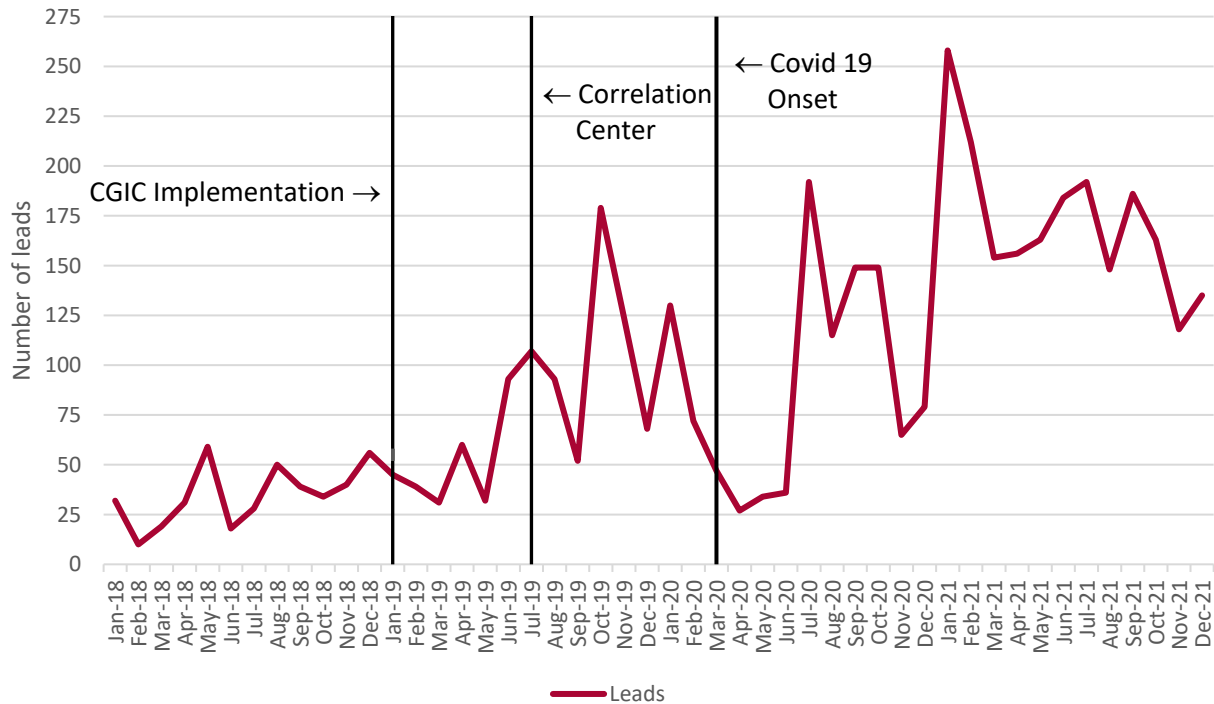
Table 3: Pre- vs. Post-CGIC implementation lead generation means

| | Pre-CGIC | | Post-CGIC | | 2-tailed |
	Mean	Std. Dev	Mean	Std. Dev	t-value *(p)*
Leads	33.15	15.50	113.53	61.67	-4.62 (.000)
n (months)	13	36	13	36	

In July 2019, the Indy CGIC/IMCFSA became a Correlation Center site. The Correlation Center performs all of the acquisition reviews for the Crime Lab. Prior to that, are reviews were performed in-house. According to a Crime Lab supervisor, they would not be able to process all the Expedited cases if they were conducting the reviews. It would take hours each day to review all the acquisitions and they do not have available personnel to do that with the expedited process and volume of entries.

Table 4 displays the mean number of leads generated by month before and after the Crime Lab became part of the Correlation Center. The mean number of leads generated per month increased by nearly 87 leads after joining the Correlation Center. This increase was statistically significant.

Table 4: Pre- vs. Post-Correlation Center lead generation means

| | Pre-Correlation Center | | Post-Correlation Center | | 2-tailed |
	Mean	Std. Dev	Mean	Std. Dev	t-value *(p)*
Leads	38.47	19.48	126.23	59.10	-6.24 (.000)
n (months)	19	30	19	30	

Figure 6: Leads vs. No Leads per month
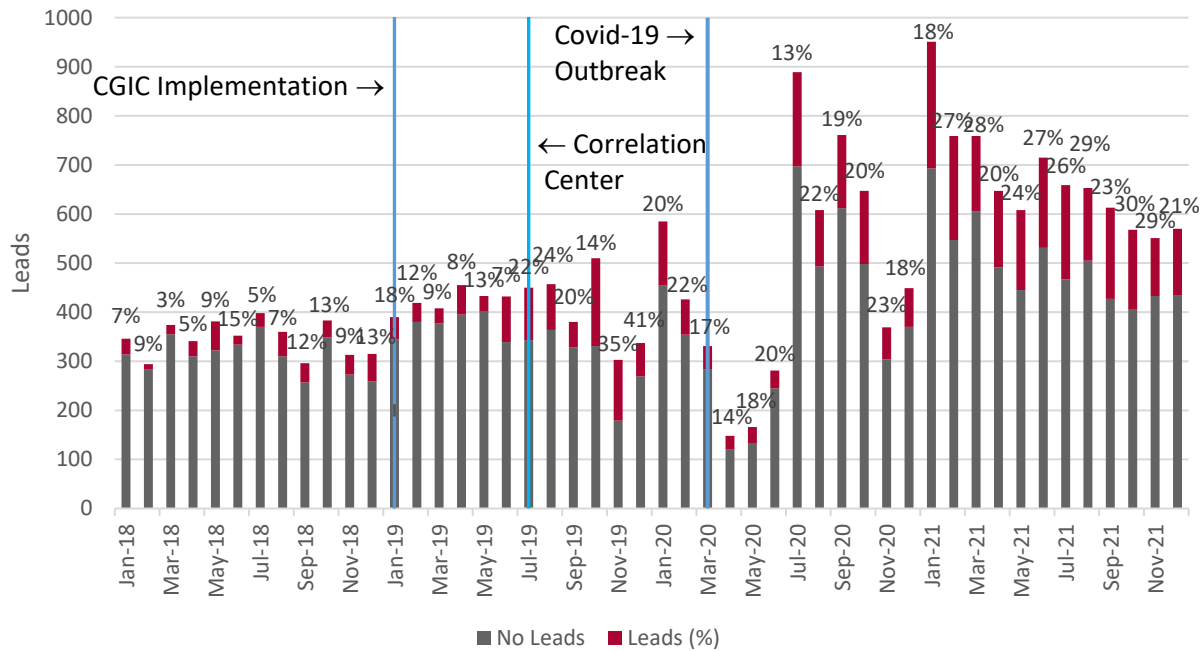
NIBIN HITS

A NIBIN hit is when two or more pieces of firearms ballistic evidence are identified as a confirmed match by a trained firearm examiner. In Indianapolis, the Crime Lab conducts lead verifications and confirmations when necessary for court hearings, charging, or warrant needs. A Lead verification must be requested by the IMPD investigators or MCPO Prosecutors. If the lead is confirmed, the data are then compiled into reports that are used for investigations and court cases. The examiner will testify in court if the need arises.

Despite the significant increase in the number of NIBIN leads generated before and after the CGIC implementation, the average number of NIBIN hits per month decreased slightly after CGIC implementation, although the difference was not statistically significant (see Table 5). The number of NIBIN hits increased slightly after IMPD joined the Correlation Center; this difference was also not statistically significant (see Table 6).

Table 5: Pre- vs. Post-CGIC implementation hit generation means

	Pre-CGIC		Post-CGIC		2-tailed
	Mean	Std. Dev	Mean	Std. Dev	t-value *(p)*
Hit	2	1.73	1.92	2.45	0.11 (0.91)
n (months)	13	36	13	36	

Table 6: Pre- vs. Post-Correlation Center hit confirmation means

	Pre-Correlation Center		Post-Correlation Center		2-tailed
	Mean	Std. Dev	Mean	Std. Dev	t-value *(p)*
Hits	1.79	1.58	2.03	2.63	-0.36 (0.72)
n (months)	19	30	19	30	

PROSECUTION DATA

The Marion County Prosecutor's Office maintained a data file with details for every case where the Indy CGIC unit made an arrest. As of January 1, 2022, the CGIC personnel arrested 594 people. MCPO filed charges in just greater than 70% of those cases. There was a marked decline in arrests and filings in 2020 due to the global pandemic but the proportion of filings remained steady, increasing in 2021. Note that not all cases dismissed by the state for federal prosecution by the USAO were filed in federal court (see Table 7).

Table 7: CGIC arrest case status

Status as of January 1, 2022	2019		2020		2021		Total	
	n	%	n	%	n	%	n	%
Total CGIC Arrests	232	100.0	169	100.0	193	100.0	594	100.0
Cases filed by MCPO	151	65.1	109	64.5	159	82.4	419	70.5
Dismissed	11	7.3	18	16.5	3	1.9	32	7.6
Dismissed for federal prosecution	50	33.1	20	18.3	5	3.1	75	17.9
Not Guilty	1	0.7	3	2.8	1	0.6	5	1.2
Guilty	76	50.3	43	39.4	29	18.2	148	35.3
Deceased Defendant	1	0.7	1	0.9	0	0.0	2	0.5
Diversion	4	2.6	1	0.9	3	1.9	8	1.9
Open	8	5.3	23	21.1	118	74.2	149	35.6
Cases not filed by MCPO	22	9.5	31	18.3	9	4.7	62	10.4
Other (subsequent) arrest	32	13.8	16	9.5	11	5.7	59	9.9
Cases filed by SD Indiana (USAO)*	27	11.6	13	7.7	11	5.7	51	8.6

*Not included in Dismissed for federal prosecution category.

We conducted a targeted survey of detectives assigned to shooting cases to further understand the role of the CGIC and NIBIN in the investigative process. Our survey was adapted from previous surveys administered at other CGIC sites (see, Katz et al., 2021; King et al., 2013; Novak & King William, 2020). We began with a universe of cases that included all shooting incidents with at least one shooting victim[4] occurring between January 1, 2018 and December 31, 2020 (N=1902). These cases were assigned to a detective from either the Aggravated Assault or Homicide Unit. From this population, we selected only incidents that had at least one associated NIBIN lead which included 345 cases assigned to 55 unique detectives. The number of cases assigned to responding detectives ranged from one to 21 with an average of six cases per detective. There were 80 cases that had multiple NIBIN leads associated with it. The number of multiple leads ranged from two to 46 (see Table 8). The mean was almost 1.82 leads per case (sd=3.38) In instances when there was more than one lead associated with a case, we tried to ask the detective about the first lead that was produced.

Table 8. Number of NIBIN leads per case

Leads	n	%
1	259	76.4
2	35	10.3
3	20	5.9
4	13	3.8
5	4	1.2
6-10	2	0.6
11-20	3	0.9
More than 20	3	0.9
Total	339	100.0

We piloted the survey process with five detectives before fielding the full survey. We first surveyed detectives on their preferred survey platform: paper copies or online. All but one detective requested the online platform. The final survey process was as follows:

1) Each case was assigned a unique 3-digit identifier. This identifier was used by the responding detective to complete the survey.
2) The research team assembled "packets" in portable document format (PDF) for each case. The PDF packet contained an introduction from the research partner and instructions on the survey process. It also included a one-to-two-page summary sheet of

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[4] In this study we defined a shooting victim as an individual who experienced was injured or killed by projectile from a firearm with a powder discharge.

each case that we were surveying the detective about as well as a link to the Qualtrics survey. The summary sheets included
   a. Case unique identification number
   b. Original case number
   c. Case type
   d. Number of shooting victims
   e. Incident date
   f. Incident Address
   g. Brief summary of incident
   h. Number of NIBIN leads associated with the case
   i. All associated NIBIN lead numbers
   j. Date of the first NIBIN lead
3) Each detective completed the online survey for every one of their cases that met the study criteria.

We printed and hand delivered the paper packet to the one detective requesting this response modality. A supervisor for the unit scanned and emailed his survey responses and a research assistant entered them into the Qualtrics platform. Data collection occurred from March 16th through May 24th, 2021. Each detective was responsible for completing the surveys for their cases. Unit supervisors completed 18 surveys by proxy for four detectives no longer available to respond to the survey (see Figure 7).

The survey consisted of approximately 20 questions. We asked for some supplemental case information and then specifics about the NIBIN lead report, the impact of the NIBIN lead on that case, and the current status of the case. Detectives were permitted to complete the surveys while on duty or for paid overtime. Six detectives submitted a total of 20 hours of overtime at a raw cost of $1159.56. These costs were _not_ paid for with grant funds. All other surveys were completed during the respondent's regular work hours.

The final sample included 246 nonfatal shooting (NFS) cases, 71 homicide cases, and 22 NFS/homicide cases (Figure 8). Six cases were excluded because the surveyed detectives reported that the case was either not their case, had been reassigned, or they had no recollection of receiving the lead report.

Figure 7: Detective Survey Case Identification Procedure

All shooting incidents with victims occuring January 1, 2019 though December 31, 2020 N=1902	Incidents with at least one NIBIN lead n=345	Detective completed survey Final sample n=339

Figure 8: Case type profile (n=339)

22
6%

71
21%

246
73%

■ Homcide
■ NFS
■ Hom/NFS
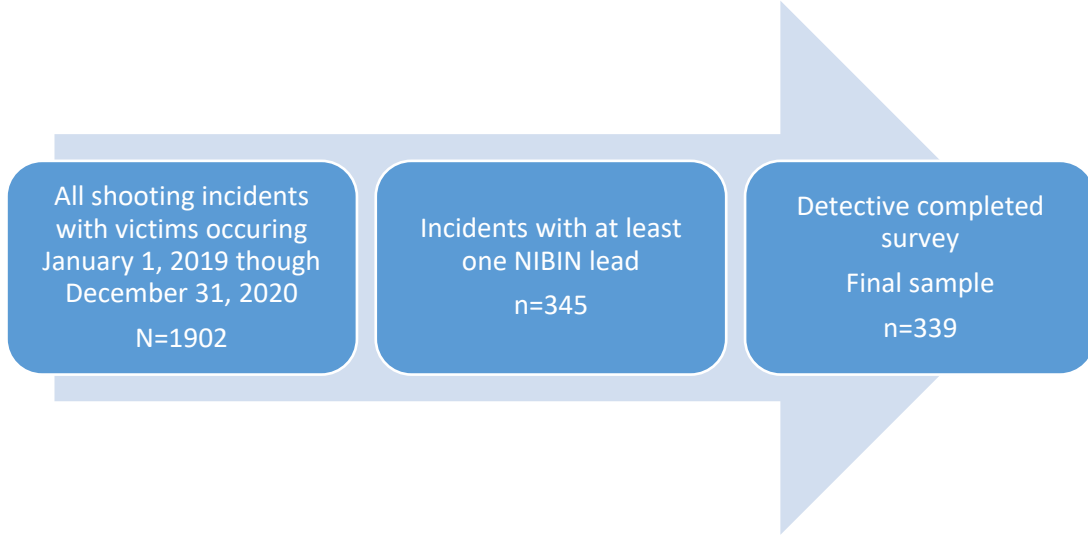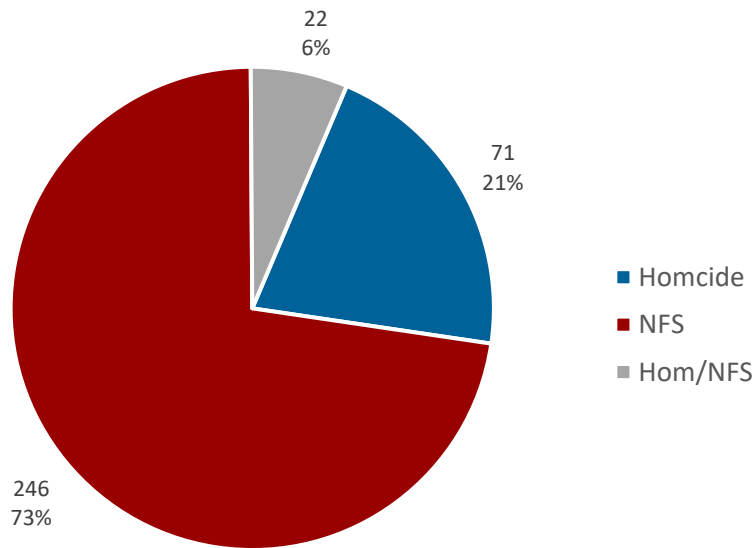
We selected nonfatal shooting cases with associated NIBIN leads occurring in 2019 and 2020. We chose this framework for several reasons; nonfatal shootings far outnumber homicide cases in Indianapolis (see Table 9) and clearance rates for nonfatal shooting cases are routinely lower that gun homicide clearance rates. Unrelated but important, the Homicide Unit had just

completed a very time and labor-intensive problem analysis for an unrelated project[5] and branch supervisors felt the Aggravated Assault detectives would be more receptive to the request for case information.

Detectives were asked to identify the circumstances surrounding the shooting incident.

Table 9 displays the case type and circumstances as reported by the assigned detective. The most common shooting incident circumstance to generate a lead involved a dispute although almost detective could not indicate a circumstance almost 19% of the time. Detectives indicated a secondary circumstance in 15% (n=51) of the cases, most commonly that the incident was also drug-related (n=12 of 51).

Table 9: Case type and circumstance

	Shooting type							
Circumstance	NFS		Homicide		NFS/Homicide		Total	
	n	%	n	%	n	%	n	%
Dispute-related	90	36.6	21	29.6	11	50.0	122	36.0
Drug	*19*	*7.7*	*1*	*1.4*	*1*	*4.5*	*21*	*6.2*
Group	*24*	*9.8*	*1*	*1.4*	*5*	*22.7*	*30*	*8.8*
Instant	*14*	*5.7*	*5*	*7.0*	*1*	*4.5*	*20*	*5.9*
Personal	*33*	*13.4*	*14*	*19.7*	*4*	*18.2*	*51*	*15.0*
Domestic/Family violence	9	3.7	6	8.5	0	0.0	15	4.4
Revenge/retaliation	21	8.5	13	18.3	1	4.5	35	10.3
Robbery	47	19.1	19	26.8	5	22.7	71	20.9
Drug	*16*	*6.5*	*6*	*8.5*	*2*	*9.1*	*24*	*7.1*
All other	*31*	*12.6*	*13*	*18.3*	*3*	*13.6*	*47*	*13.9*
Other	15	6.1	3	4.2	1	4.5	19	5.6
Unknown	56	22.8	6	8.5	1	4.5	63	18.6
Total	246	100.0	71	100.0	22	100.0	339	100.0

THE LEAD REPORT

For descriptive purposes, we examined the time between the shooting incident and the first NIBIN lead establishment, in essence, the evidence processing time. The mean number of days between the shooting incident and the first NIBIN lead report ranged between 0 and 821 days. The mean was 88 days, and the median was 37 days.

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[5] *Indianapolis Violence Reduction: Assessment & Recommendations by the National Institute for Criminal Justice Reform, May 2020*

We then examined the time between the NIBIN lead establishment and when the detective received the lead report. The majority of detectives (79.1%) reported that they received the NIBIN lead report for their case in a timely manner with over one-half (58.4%) reporting they received the NIBIN lead the day it was generated by the lab. The remaining 20.9% reported the lead was untimely or delayed.

Figure 9 displays the time between the NIBIN lead establishment and the when the detective received the lead report. The mean was 32 days and the median was 0 days.

Figure 9: Time between NIBIN lead establishment and detective receipt of lead report (n=325)
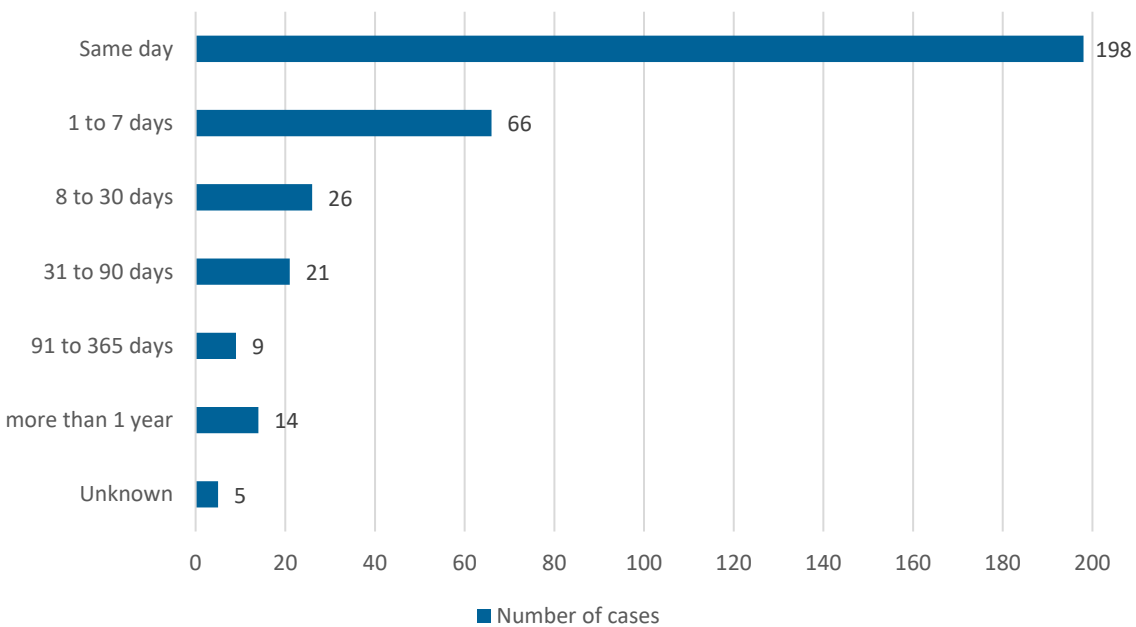
NIBIN lead reports match two evidence dyads: a fired casing to fired casing or a fired casing to a firearm. The majority of evidence dyads (70.8%) were casing to casing as seen in Figure 10.

Figure 10: Evidence dyad profile (n=339)
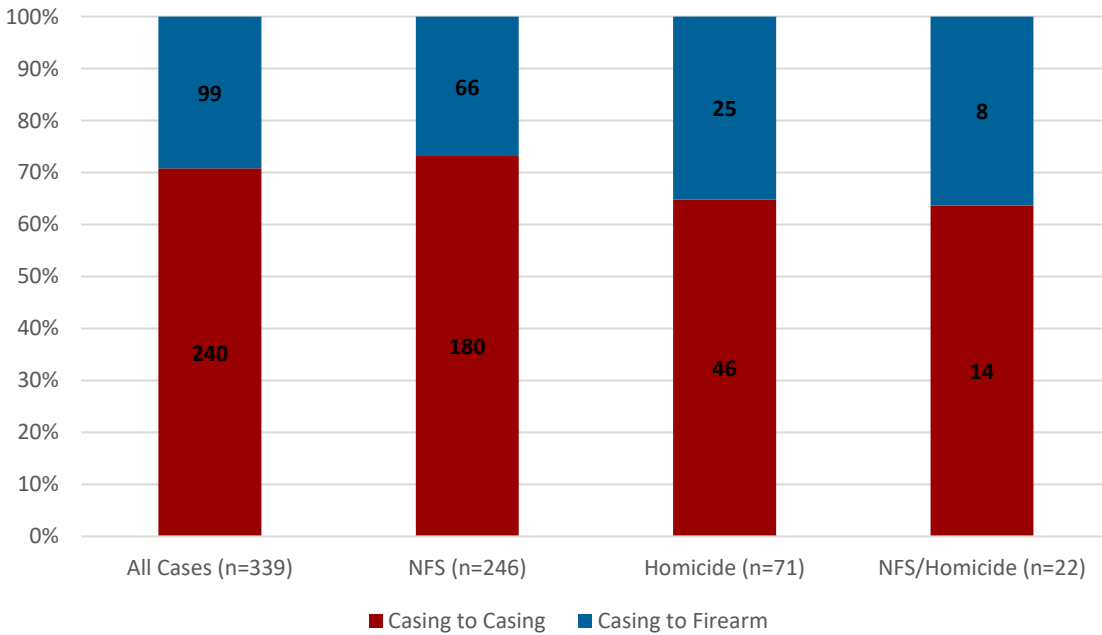
We asked detectives if they were offered assistance by a CGIC detective or a CGIC analyst regarding the lead they received. A majority of the detectives (67%) reported they were not offered assistance. Fourteen percent reported that they were offered assistance from a CGIC detective or analysts and the remaining 14% were unsure or could not recall.

As one measure of impact, we asked about the status of the case on the date the lead was received (T1) and then again on the date the detective responded to the survey (T2) for that case to examine changes in status. Detectives were asked to select as many responses and applicable. There were 22 response choices for each case status variable which we recoded into eight categories to ease interpretation. The recoded categories generally reflect the case process stages through the criminal legal system. We then selected the most advanced stage response.

Figure 11: Case Status
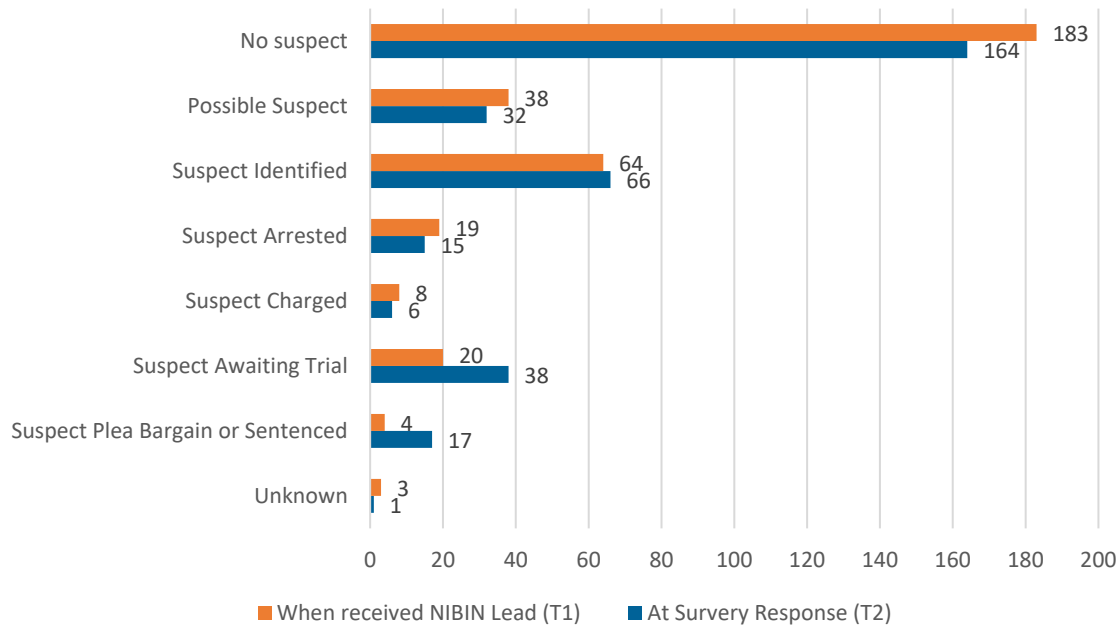
We then used these two variables to determine if the case status had changed (i.e., T1-T2≠0 then case status changed). This measure was far from perfect given the nature of the "select all that apply" variables used in its construction however we feel it is at least a good underestimate of the case status change. Roughly 25% (n=83) of cases had a status change from the time the lead was received until the time the detective responded to the survey about that case.

These findings should be interpreted with caution because we are unable to differentiate between case status changes due to the NIBIN lead or simply the natural progression of the case as time passes.

However, when asked about how the helpfulness of the lead with the case, only one-third of detectives responded that the lead was either helpful or very helpful for that case (see Table 10).

Table 10: NIBIN lead helpfulness

Response	n	%
Very helpful or helpful	106	31.3
Neither	154	45.4
Unhelpful or very unhelpful	68	20.1
Missing	11	3.2
Total	339	100.0

We then collapsed the helpfulness variable into a binary categories (0=Unhelpful; 1=Helpful) to examine the time from the incident to the detective receiving the lead and helpfulness. 'Neither' responses were included in the not helpful category. Twenty-five cases were excluded from the analysis because the detective did not provide a date for when they received the lead (Table 11). There was no significant relationship between the time from the incident to the NIBIN lead and the detective's categorization of the lead as helpful (Tables 11 and 12).

Table 11: NIBIN lead helpfulness and time to lead receipt (categorical)

Days	Unhelpful		Helpful		Total		χ^2 (p)
	n	%	n	%	n	%	
0 to 7	165	78.6	81	81.5	246	15.5	2.6 (.621)
8 to 30	18	8.6	8	7.7	26	8.3	
31 to 90	12	13.4	8	6.6	20	20.0	
91 to 365	7	3.3	1	1.0	8	8.0	
>365	8	3.8	6	4.6	14	14.0	
Total	210	100.0	104	100.0	314	100.0	

Table 12: NIBIN lead helpfulness and time to lead receipt (interval)

	Days between incident and lead receipt		
	Mean (SD)	Median	t (p)
Lead helpful (n=104)	39.69 (135.7)	0	-.72 (.236)
Lead unhelpful/Neither (n=210)	29.89 (101.1)	0	

In an effort to tease out what might contribute to a NIBIN lead being helpful to a detective we examined several variables and their correlation with helpfulness (Table 13).

Table 13: Victim and Witness Cooperation Status

		Victim	Witness	n	%
Cooperative	NFS NFS/Homicide	No	--	45	13.3
		No	No	65	19.2
		No	Neither	16	4.7
		No	Yes	32	9.4
		Neither	--	6	1.8
		Neither	No	6	1.8
		Neither	Neither	5	1.5
		Neither	Yes	5	1.5
		Yes	--	20	5.9
		Yes	No	7	2.1
		Yes	Neither	6	1.8
		Yes	Yes	47	13.9
	Homicide	--	No	29	8.6
		--	Neither	4	1.2
		--	Yes	37	10.9
		--	--	9	2.7
Total				339	100.0

Next, we recoded victim and witness cooperativeness into a binary yes/no variable. 'Neither' responses were coded into the No category. Table 14 displays victim cooperativeness as assessed by the detective and NIBIN lead helpfulness for nonfatal shooting cases only. The relationship between victim cooperativeness and the helpfulness of the NIBIN lead was not significant at the traditional but arbitrary .05 level (see, for example Wasserstein & Lazar, 2016) but was significant at the .15 level meaning we are 85% sure there is a relationship between the two variable although the effect size is small. The relationship between witness cooperation and NIBIN lead helpfulness was not significant.

Table 14: Victim Cooperation and NIBIN Lead Helpfulness (NFS cases only)

Cooperation	Not Helpful n	%	Helpful n	%	Total n	%	χ^2 (p)	φ(ES)
No	122	72.6	39	61.9	161	69.7	2.49 (0.12)	.10
Yes	46	27.4	24	38.1	70	30.3		
Total	168	100.0	63	100.0	231	100.0		

SUMMARY

The Indy CGIC officially "stood up" in January 2019. The co-location of all participating agencies made the Indy CGIC unique at the time. A rigorous outcome evaluation of the Indy CGIC was not possible. The majority of the grant project budget was dedicated to civilian staff salaries (see Figure 2) and, therefore, available outcome measures could not be directly linked to these hires. The Covid-19 global pandemic, the murder of George Floyd, and other similar events occurring during the project period affected law enforcement operations, including CGIC operations, in so many immeasurable ways. However, we do know that the Indy CGIC changed the way the IMPD and other collaborating agencies do business as it relates to criminal gun violence.

We know that increases in ballistic evidence collection as well as NIBIN submissions and leads can be associated with the Indy CGIC formation. The Indy CGIC became a national model for the co-location of CGIC agencies as evidenced by peer to peer virtual and on-site visits. The Indy CGIC also led to a larger regional collaboration, the Indiana Crime Guns Task Force, that is supported with state funding.

However, we did not see an increase in the number of NIBIN hits during the project period despite the huge increase in NIBIN inputs and leads. CGIC arrests declined over the project period although the proportion of cases filed by MCPO increased overall. Federal filings of CGIC cases decreased over the project period. That said, it appears the CGIC is appropriately focusing on those who are involved in gun violence in their day-to-day operations.

An in-depth examination of nonfatal shooting cases with NIBIN leads revealed that the mean evidence processing time (incident to lead establishment) was almost three months. NIBIN lead information was delivered in a timely fashion to detectives, most commonly the same day. However, case detectives indicated the lead information was helpful only about one-third of the time and resulted in a change of case status about 25% of the time.

The change in output measures related to the Indy CGIC is clear. There is a new way to do business as it relates to gun crime evidence in Indianapolis. Increasing NIBIN acquisitions, regardless of lead generation is important to the ongoing growth of the NIBIN database and future linkages for both violent and non-violent crime. On the output side, as evidenced here, more evidence submission begets more NIBIN leads that need investigative attention. This increased workflow highlights the need for more resources to triage NIBIN leads and prioritize those most likely to result in successful investigations and impact.

REFERENCES

Katz, C., M., Flippin, M., Huff, J., King William, R., & Ellefritz, J. (2021). *Evaluation of the Phoenix Crime Gun Intelligence Center*. A. S. U. Center for Violence Prevention & Community Safety. https://crimegunintelcenters.org/wp-content/uploads/2021/05/Evaluation-of-the-Phoenix-Crime-Gun-Intelligence-Center_Published-Version.pdf

King, W., Wells, W., Katz, C., Maguire, E., & Frank, J. (2013). *Opening the Black Box of NIBIN: A Process and Outcome Evaluation of the Use of NIBIN and its Effects on Criminal Investigtions, Final Report*. U. S. D. o. J. National Institute of Justice. https://www.ncjrs.gov/pdffiles1/nij/grants/243875.pdf

Novak, K. J., & King William, R. (2020). *Evaluation of the Kansas City Crime Gun Intelligence Center. Final Report prepared for the National Gun Crime Intelligence Center Initiative*. Bureau of Justice Assistance, Office of Justice Programs, U.S. Department of Justice. https://crimegunintelcenters.org/wp-content/uploads/2020/10/KC-CGIC-Final-Report-2020.pdf

Wasserstein, R. L., & Lazar, N. A. (2016). The ASA's statement on p-values: Context, process, and purpose. *The American Statistician, 70*(2), 129-133. https://doi.org/10.1080/00031305.2016.1154108