The Value of Patrol-Driven Intelligence-led Policing: Evaluating the Communication Within, Perceptions Regarding, and Impacts of the Phoenix Police Department's Intelligence Officer Program

by

A. Johannes Bottema

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Graduate Supervisory Committee:

Cody W. Telep, Chair
Jacob T.N. Young
William Terrill

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ABSTRACT

Intelligence, or the "critical and substantive products that support law enforcement decision making" (Ratcliffe, 2007, p. v), is a vital component within contemporary law enforcement in the United States. It has been used in a multitude of ways to address problems with specific crimes, populations, or locations. Often, this is accomplished through an intelligence-led policing (ILP) framework. ILP frameworks encompass the utilization of intelligence and analysis to achieve "crime and harm reduction, disruption and prevention through strategic and tactical management, deployment and enforcement" (Ratcliffe, 2016, p.5). While related strategies can be incorporated within an ILP approach, attempts at adopting intelligence-led frameworks in law enforcement typically target specific crimes or are orchestrated from the top down. Patrol-driven ILP initiatives are particularly uncommon, and there have been no known evaluations of such efforts to date.

This dissertation addresses this gap in the literature by analyzing and evaluating the Phoenix Police Department's (PPD) Intelligence Officer Program (IOP). More specifically, it explores how communication and information sharing function in the program, the program's perceived value to the patrol function, and whether the program impacts officer behavior, specifically in terms of productivity and proactivity. Data for examining these three key areas originate from various sources, including surveys of three different groups of stakeholders (patrol officers, intelligence officers [IOs], and IO supervisors), Intelligence Officer Reports (IORs), executive reports from the program, and official activity data from the Crime Analysis and Research Unit (CARU).

Results suggest that patrol officers and IOs are involved in communication and information sharing, and perceptions suggest that the IOP is improving these. Diverse information is shared within the program, which is also reflected by success stories that arise from it. Broadly the stakeholders examined seem to be receptive to and supportive of the IOP, with more awareness and familiarity with the program resulting in more supportive views of it. In terms of tangible measures, IOP training and resources appear to decrease both productivity and proactivity. The implications of the aforementioned findings for both practice and research are discussed.

DEDICATION

This dissertation was the final summit that had to be conquered on the journey to obtaining my Ph.D. While the adventure of obtaining a terminal degree has been a significant chapter in my life, it was made possible by the characters and events from the many preceding chapters. This project is dedicated to all those who have been a part of my story so far. Whether we were together for peaks, valleys, or anything in between, it was thanks to you that this achievement was made possible.

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CHAPTER 1

INTRODUCTION

Intelligence, or the "critical and substantive products that support law enforcement decision making" (Ratcliffe, 2007, p.v), is a vital component within contemporary law enforcement in the United States. While intelligence permeates all levels of law enforcement, one noticeable trend has been the adoption of the intelligence-led policing (ILP) framework, particularly at the local level (Carter, 2009). Defined as the utilization of intelligence and analysis to achieve "crime and harm reduction, disruption and prevention through strategic and tactical management, deployment and enforcement" (Ratcliffe, 2016, p.5), ILP has been argued to have the "potential to be the most important law enforcement innovation of the twenty-first century" (Kelling & Bratton, 2006, p.5).

ILP is critical as it allows the use of intelligence to become integrated into law enforcement organizations. Such integration allows for more precise, coordinated, and evidence-based approaches to be taken. The benefits of these approaches are potentially increasing both the efficiency and effectiveness of law enforcement organizations. Yet, while such practices have expanded, the implementation of ILP has varied widely both nationally and internationally. Vast differences in approaches have made it challenging to identify what, if any, practices under different ILP frameworks are effective. Further, and perhaps even more problematic, adoptions of patrol-driven intelligence-led frameworks are relatively uncommon. There have been no known evaluations on how these operate and how effective they are for local law enforcement.

The purpose of this dissertation is to begin addressing this gap in the research by evaluating a local patrol-driven ILP effort. More specifically, this dissertation evaluates

the Phoenix Police Department's (PPD) Intelligence Officer Program (IOP) (see Bottema, 2017; Bottema & Telep, 2019; Telep et al., 2018). Broadly, the evaluation seeks to explore how communication and information sharing operate within the program, the perceived value of the IOP to patrol, and how the training from the program has impacted tangible measures of police performance.

Using a combination of surveys, IOP metrics, and PPD activity data, I examine these areas by addressing three research questions. First, how do communication and information sharing function within the intelligence officer program, which information is prioritized for sharing and analysis, and how is the successful use of this information conceptualized? Second, to what extent do patrol officers, intelligence officers, and intelligence officer supervisors perceive the intelligence officer program to be valuable to patrol activities and the patrol function as a whole? And finally, how, if at all, has the intelligence officer program's training and resources impacted patrol officer productivity and proactivity over time?

Plan for Dissertation

The roadmap for this dissertation is as follows: Chapter 2 provides the background for this work by exploring the literature on intelligence and intelligence-led policing and the challenges of its implementation. It also explores current limitations in terms of the lack of focus on patrol-driven ILP efforts. Further, the chapter provides an in-depth description of the PPD's intelligence officer program. Chapter 2 ends by outlining the current focus of the research conducted for the dissertation. Chapter 3 provides the methodology utilized for each of the research questions. Chapters 4 through 6 deliver the results from all of the analyses. These focus on communication and

information sharing in the IOP, the perceived value of the IOP to the patrol function, and the impact of the IOP on productivity and proactivity, respectively. Chapter 7 summarizes and discusses the key results and limitations, outlines policy implications and directions for future research, as well as draws overall conclusions.

CHAPTER 2

BACKGROUND

This chapter addresses the literature that informs this dissertation and provides a detailed overview of the program on which it focuses. The literature provides background on intelligence and intelligence-led policing and efforts that have used an intelligence-led approach, as well as what has been learned about its implementation thus far. The description of the Phoenix Police Departments' intelligence officer program outlines its purpose, how the program has been enacted and evolved, and what research has been conducted regarding its impacts. This patrol-driven ILP effort is also contextualized within broad reform efforts in policing and the diffusion of innovation model (Rogers, 2003). The chapter ends with plans for the current study.

Literature Review

Intelligence and the Intelligence Cycle

Before evaluating a patrol-driven intelligence-led policing program, it is critical to understand what intelligence is. At the most basic level, *intelligence* can be understood to be information that has been processed and evaluated to better inform decisions regarding a specific purpose. Within the criminal justice realm, and particularly in relation to policing, this is best defined by Ratcliffe (2007, p. v), who describes intelligence as the "critical and substantive products that support law enforcement decision making." Typically, such products arise from following what is known as the *intelligence cycl*e. This model is made up of a varying number of steps but typically includes planning and direction, collection and collation, evaluation or analysis, dissemination, and reevaluation of information (Harris, 1976).

The initial stages of planning and direction begin with identifying an issue that an entity plans to address (Larm, 2011). Collection then occurs, in which all possible relevant information is collated and evaluated in terms of usefulness (Coambs, 2011). This evaluation is driven by a number of standards, including relevance, reliability, and validity (Peterson, 2011a). Following this, the data are analyzed to give them meaning and inform an entity of the best way to address their identified problem (Peterson, 2011b). This processed information is then disseminated on a need-to-know and right-to-know basis (Fowler, 2011). Following this, additional information is gathered, and all information is revaluated to update findings and identify whether the original issue requires further attention.

History of Intelligence

With this appreciation of intelligence and its development, it is also important to recognize why such a concept is relevant to policing. While being utilized in various ways, intelligence was a military tool in the United States since the Revolutionary War and has also long been utilized by various federal agencies (Morehouse, 2011). That being said, intelligence was seldom utilized by civilian law enforcement before the 1950's when the Law Enforcement Intelligence Unit (LEIU) was formed, and the usefulness of intelligence for addressing organized crime was recognized. Yet, it was not until the 1970's that the use of intelligence proliferated throughout the United States (Johnson 2010; Morehouse, 2011). It was during this period that the Department of Justice pressed for agencies to "establish and maintain the capability to gather and evaluate information" as well as disseminate and share it in an attempt to address "organized crime and public disorder" (International Association of Chiefs of Police

[IACP], 2005, p. 5). This development was important as the focus shifted from the generation of intelligence on individuals to conducting proper analysis (Carter, 2009).

The use of intelligence by civilian law enforcement continued to grow as time progressed. This growth was also aided by the rising interest in crime analysis and data-driven approaches. A prime example of this interest would be the implementation of COMPSTAT in New York during the 1990s. As technology and the ability for crime analysis have improved over time, the use of the gathering and application of intelligence has increased for both tactical and strategic purposes. However, the most significant development in the use of intelligence by law enforcement in the United States occurred following the September 11 terrorist attacks in 2001.

The intelligence failures, particularly regarding information sharing, contributing to the September 11 attacks led to the creation of the Department of Homeland Security in 2002, the restructuring of the Federal Bureau of Investigation, and the introduction of the National Criminal Intelligence Sharing Plan (NCISP) in 2003 (McGarrell et al., 2007). The NCISP stressed the importance of developing and sharing actionable intelligence products at the state, local, tribal, and federal levels. A key part of this approach entailed adopting ILP strategies and providing the tools and resources necessary to enable the effective collection, development, and sharing of intelligence (Global Intelligence Working Group, 2003). Such priorities were then reemphasized and expanded on with additional recommendations and action items in October 2013, when a second version of the NCISP was released.

All of these changes promoted greater utilization and sharing of intelligence. There is evidence that such changes may have helped facilitate this objective in

increasing agency interaction and improving intelligence related to organizational functions (Schaible & Sheffield, 2012). While much progress has been made at the federal level, particularly through the introduction and utilization of almost 80 fusion centers nationwide (Department of Homeland Security, 2016), some initial evaluations suggest there is a disconnect between fusion centers and other law enforcement agencies, with the exception of some rural ones (Lewandowski et al., 2017). More generally, the use of intelligence at the local level of law enforcement seems to be less developed.

Intelligence-Led Policing (ILP)

Perhaps the most significant efforts to utilize intelligence at the local level fall under the intelligence-led policing (ILP) framework. These emphasize taking more precise and data-driven approaches to address crime problems. While the exact origins of intelligence-led policing are not clear cut, it has been argued that it originated in the United Kingdom in the 1980s as part of efforts to address burglary and motor vehicle theft (McGarrell et al., 2007), as well as serious repeat offenders (Ratcliffe, 2016). Such practices then led to the creation and adoption of the British National Intelligence Model (NIM) in the early 2000s, which sought to deeply integrate ILP into British policing (Carter & Carter, 2009). Within the United States context, the most significant adoption of and push for intelligence-led policing at all levels coincided with the earlier aforementioned focus on and prioritization of intelligence that was spurred by the September 11 attacks.

Following these developments and the resulting push for increased adoption of ILP, several efforts were made to clarify what ILP entailed and how it could be implemented. One early example of this was a guide put forth by the Office of

Community Oriented Policing Services (COPS), which built on the NCISP and provided additional details on various intelligence-related topics (see Carter, 2009). In addition, several other models and perspectives were developed to aid in adopting ILP, with the most prominent of these being Ratcliffe's (2008) 3-i model and Carter and Carter's (2009) model.

Ratcliffe's (2008) 3-i model is named after the three key actions of focus within this framework: interpret, influence, and impact. In this regard, the approach of this model is for the criminal environment to be interpreted in a meaningful way, which leads to the utilization of information to create intelligence products that can be used to influence decision-makers, and, ultimately, impact the criminal environment by addressing the issues that had been identified. Within the context of this model, Ratcliffe (2008, p. 89) defines intelligence-led policing as: "A business model and managerial philosophy where data analysis and crime intelligence are pivotal to an objective, decision-making framework that facilitates crime and problem reduction, disruption and prevention through both strategic management and effective enforcement strategies that target prolific and serious offenders."

In contrast, Carter and Carter (2009) propose a broader model that adheres more to the guidelines provided by the NCISP. Carter (2013, p. 25) argues that it takes more of an all-threats and all-crimes approach that not only encompasses events that have happened but also "suspicious behavior, specific threats, complex criminality, and street crimes." Furthermore, one of the model's main goals is to develop strategic and operational priorities using intelligence products from multiple sources, agencies, organizations, and communities, as opposed to focusing on one jurisdiction as suggested

in the 3-i model (Carter, 2013). Additionally, the Carter and Carter model (2009) is argued to focus on the broader analytic component of intelligence analysis, rather than just the crime analysis/mapping focus on the 3-i model (Carter, 2013). These differences are somewhat reflected in the definition that Carter and Carter (2009, p. 12) provide for intelligence-led policing: "The collection and analysis of information related to crime and conditions that contribute to crime, resulting in an actionable intelligence product intended to aid law enforcement in developing tactical responses to threats and/or strategic planning related to emerging or changing threats."

Due to the different models and generally broad scope of the ILP framework, what it specifically entails can be considered somewhat ambiguous (Alach, 2011; Carter, 2016). Further, this has led to confusion about what ILP is among not only academics but also police officers and supervisors (Ratcliffe, 2005). Philosophical differences can lead to different interpretations and implementation of intelligence-led policing (Carter, 2013). Cope (2004) highlighted how this is problematic, as without understanding what ILP is, its full potential value cannot be realized. Further, this lack of understanding also makes it difficult to ascertain how widely adopted it is, especially as departments may profess to be intelligence-led, when in reality, they may not have the capacity to be so (Carter, 2013).

This confusion is also generated by the fact that ILP shares some overlap with other policing strategies and models, such as community-oriented policing, and problem-oriented policing, which take more directed and systematic approaches to utilize strategically crafted measures to address a wide array of different problems (see: Eck et al., 2013). This overlap in approach has made it somewhat difficult to differentiate ILP

from these other innovations (Carter & Carter, 2009). This issue is further exacerbated by the fact that Ratcliffe's (2008) and Carter and Carter's (2009) models of ILP view these other policing strategies through different lenses. More specifically, Ratcliffe's 3-i model sees the different strategies as conceptually distinct, while the Carter and Carter model would suggest that these provide the foundation for intelligence-led policing (Carter, 2013). Yet, some initial efforts have been made to help ensure that ILP is conceptually separate from other policing models, such as community-oriented policing (Carter & Fox, 2019). With such steps being taken, the clarity of what ILP is and how it continues to evolve should become clearer, facilitating better implementation and evaluation of different ILP strategies.

Despite these differences in definitions, it could be argued that these perspectives are beginning to converge more. In Ratcliffe's (2016) more recent work, ILP has been conceptualized as more of a framework based on the utilization of intelligence and analysis to achieve "crime and harm reduction, disruption and prevention through strategic and tactical management, deployment and enforcement" (Ratcliffe, 2016, p.5). Due to this broad focus on crime and harm, it can be argued that ILP has taken an "all-crimes, all-hazards, all-harms business approach" (Ratcliffe, 2016, p.67), which supports Carter and Carter's (2009) approach.

In addition to increasing their definitional overlap, it also critical to recognize that both of the prominent ILP models acknowledge that ILP is an organizational commitment and is prevention-oriented, as well as reliant on both an analyst's ability to influence decision making and that of higher-ups to impact the environment in which they operate (Carter, 2013). The focus on the use of analysts and being prevention-oriented are key

components of any ILP framework, which differentiate it from other standard policing models that tend to be more reactive and less focused (Lum & Koper, 2017; Weisburd & Eck, 2004).

The common ground between the definitions has significantly impacted how ILP has been typically implemented. Traditionally, this has been more of an organizational focus on utilizing analysts and those at managerial levels to address and guide more strategic operations. Yet, critical to stress is that ILP is somewhat versatile and has been adapted in various ways to benefit the agencies adopting it (Carter & Phillips, 2015; Ratcliffe, 2008); this more strategic focus has historically been relatively consistent. This approach is starting to change somewhat, as described in the section addressing local examples below. More specifically, this addresses how some implementations of ILP have shifted to focus on particular people, crimes, or cases.

The aforementioned versatility of ILP has helped it become a global approach that has been adopted to varying degrees and in different forms in many countries outside of the UK. This adoption has perhaps been most noticeable in Australia, Canada, New Zealand, and the United States (Ratcliffe, 2008), yet others are becoming increasingly interested, as demonstrated by the guidebook published by the Organization for Security and Cooperation in Europe (OSCE) in 2017. Interest in intelligence-led policing has also been demonstrated in other areas such as Honduras (Ratcliffe et al., 2015) and South Africa (Budhram, 2015). Such examples illustrate the international importance of intelligence-led policing and thereby the necessity of evaluating strategies that fall under this framework.

ILP at the Local Level

With this overview of ILP in mind, it is critical to examine some of the strategies that have been adopted under this model. As indicated above, these encompass a wide array of different approaches that have traditionally been focused on analysts and police leadership. There has, however, been a transition to also focus on resources at other levels of police departments' organizations. Such developments have also been utilized to target a wide variety of people, places, crimes, or some combination of these. A prime example of people being targeted was England and Wales's attempts to address juvenile crime with various strategies, including an intelligence-driven intensive supervision and surveillance program (Waters, 2006). Within this approach, intelligence officers were utilized to identify and monitor problematic juveniles. Waters (2006, p. 254) described the intelligence aspect of the program as required, saying that "without close cooperation and intelligence from police … serious young offenders will remain an intractable problem."

Interviews with offenders have also demonstrated the value of targeting repeat offenders. A study by Summers and Rossmo (2019) found that chronic offenders committing burglary, robbery, and or vehicle crimes were desisting after initially participating in some limited displaced offending due to concentrated efforts to target them. The offenders expressed significant concerns with being recognized, which speaks to the value of sharing the profiles and related intelligence on these offenders to target repeat offenders more effectively and decrease their criminal offending.

Another example of people being successfully targeted by ILP related strategies was the Philadelphia policing tactics experiment (Groff et al., 2015). This study

examined the impacts of foot patrol, problem-oriented policing, and offender-focused policing within violent hot spots over a 12-24-week period. The most effective and only effort that significantly decreased violent crime was the offender-focused approach, which relates to intelligence-led policing due to its crime and intelligence analysis-driven efforts to target repeat offenders (Ratcliffe, 2007; 2008). Groff and colleagues (2015) specifically highlighted the value of having an intelligence analyst help provide direction, in addition to having a dedicated team with a clear mission. This strategy contributed to reductions in violent crime and violent felonies by 42 percent and 50 percent, respectively, relative to control areas. Further, diffusion of crime reduction benefits to nearby areas was also noted. Clearly, it can be effective to utilize intelligence-led policing strategies to target offenders within crime hot spots.

ILP has also been demonstrated to impact specific crimes in specific locations. For example, a study by Morton and colleagues (2019) in Queensland, Australia, found that ILP could be utilized to address drug dealing in hotels by utilizing local efforts that involve partnering with hoteliers. More specifically, the researchers found that cooperation with hoteliers allowed for a more intelligence-driven approach to the problem. This approach led to increases in the recognition and reporting of drug offenders in the hotels, which also resulted in increased law enforcement actions against these offenders (Morton et al., 2019). Overall, these and previously mentioned studies illustrate that that ILP has the capacity to address a wide variety of issues.

There are also many examples in which ILP has been asserted to be effective, yet many of these claims thus far lack rigorous evaluations. For example, ILP has been argued to be effective at addressing a myriad of different crimes at different levels of

enforcement, including those related to organized crime (Wright & Heard, 2018), white-collar crime (Peterson, 2018), cybercrime (Sobbi & Vives, 2018), financial crimes (Callery & Walton, 2018), and national security (Gervais, 2018). In terms of the final point of national security, McGarrell and colleagues (2007) asserted that ILP could be used to combat terrorism and crimes utilized to help facilitate or fund such activities. They argued that the overarching impact of this could be greater "effectiveness and efficiency of law enforcement and the safety of communities and nations." (McGarrell et al., 2007, p. 154).

In addition to addressing the crimes above, some of which are perhaps less prevalent, ILP can also be utilized to address crimes that are relatively more common for local police departments, such as violent crime. One example illustrating this is a Bureau of Justice Assistance (2012) report that explored how different law enforcement agencies in eight states were utilizing intelligence-led policing to address various violent crime issues. These included violence across different settings, such as urban and rural, and looked at various issues from focusing on groups, such as gangs, to crimes such as homicide. Many of these interventions were also tied to other policing strategies, such as targeting hot spots.

From this section, it should be clear that overall intelligence-led policing has the capacity to be a tremendously useful tool in many areas. Yet, as highlighted by Carter, its evidence base is lacking due to a "paucity of conceptual and empirical research" (Carter, 2013, p. 1). While the research to date demonstrates some evidence for success and many more areas in which it could be successful, further evaluation of ILP strategies is critical

for its development. The next section will discuss the known challenges of implementing ILP.

Challenges with Implementing ILP

Introducing innovative strategies or approaches such as ILP and getting these to be adopted is a challenging endeavor. One way to consider this is within the context of the diffusion of innovation model (see Rogers, 2003). Within this model, there are five key adopter groups that engage with innovations at different times. These groups include innovators (2.5%), early adopters (13.5%), early majority (34%), late majority (34%), and laggards (16%). To maximize diffusion and adoption, continued growth over time is necessary, as is specifically utilizing tailored methods to target each of these groups. While the patrol-driven ILP approach focused on in this dissertation is non-traditional in that the innovators, early adopters, and to some extent, the early majority are selected to participate, this model is still relevant. Specifically, the model is useful in examining the extent to which patrol officers engage with the innovation as the program's success depends on this.

In addition to having to address groups that adopt innovations at different rates, there are also five key factors identified by Rogers (2003) that are posited to influence the diffusion process. These include the perceived relative advantage the innovation offers, the compatibility it has to the needs of potential adopters, the complexity of the innovation, its potential for trialability, and observability in terms of the capacity of the innovation to produce tangible results. Compatibility, relative advantages, and observability are examined within this dissertation by looking at communication and information sharing, perceptions of different police stakeholders, and tangible outputs.

While not a focus of this dissertation, it is also worth noting that trialability was considered in the IOP implementation, given that it started with a pilot in one precinct.

While the implementation of innovation is generally challenging, implementing police reform is a process that faces many obstacles. These issues are why "efforts to change the police often fall far short or fail" (Skogan, 2008, p.23). Specific reasons applicable but not limited to policing include resistance from different policing stakeholders, competing demands, public unresponsiveness, incidents of misconduct, and transitions in leadership.

One area particularly relevant to this dissertation is the receptivity to innovation by different police stakeholders. Receptivity in policing has been examined in a number of ways, including organizational change (Cochran et al., 2002), the implementation of broader concepts or strategies (Jenkins, 2016) such as evidence-based policing (Telep, 2017; Telep & Lum, 2014; Telep & Winegar, 2016) as well as specific technologies, such as body-worn cameras (Ready & Young, 2015). One particularly relevant idea examined on the body-worn camera piece that is also related to the previously mentioned idea of relative advantage is legitimacy.

Legitimacy in this context can be conceptualized as when "actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (Suchman, 1995, p. 574). Ready and Young (2015) address this more specifically in terms of pragmatic legitimacy and whether body-worn cameras are perceived to add practical value to patrol. Perceptions regarding practical value regarding ILP are a key area that this dissertation will explore.

In addition, it is also worth noting is that strategies introduced with the best intentions are not always successful in achieving their goals. For example, Sanders and colleagues (2015) found that ILP in a Canadian context was adopted in more of a rhetorical sense than a practical one. More specifically, through their in-depth interviews with officers, crime analysts, and information technology personnel from six police services, Sanders and colleagues (2015) learned that departments were treating ILP as more of an accountability mechanism than a practical framework.

A number of other studies have also highlighted other specific implementation issues that inhibit or create issues for the adoption of ILP. Such factors include overcoming existing organizational policing cultures (Rafcliffe & Guidetti, 2008; Sanders et al., 2015; Sheptycki, 2004), issues with policies and lack of personnel, training and decision making (Carter & Philips, 2015), problems with the integration of analysts and their relationships with data, tools, and decision-makers (Burcher & Whelan, 2019), and general challenges with leadership (Darroch & Mazerrole, 2013; Ratcliffe, 2005).

Personnel have been demonstrated to be particularly important, with some researchers arguing that the success of ILP strategies is reliant on people as opposed to technologies, organizational structures, or other issues (James, 2017). Yet, it is also clear ILP programs fail or become ineffective without adequate training, support, and resources. This knowledge further stresses the need to evaluate ILP strategies so that such issues can be overcome.

Limitations of Prior Research

Generally, the literature covering ILP strategies and their effectiveness is very much in its infancy. Thus far, analysis and evaluation efforts have focused on short-term

ILP projects or ILP elements that are merely parts of larger strategies. While such work is important, there are currently no studies that evaluate efforts to integrate ILP into patrol and the daily functioning of police departments. As ILP has traditionally been examined as being a managerial strategy, it makes sense that patrol has not historically been central to evaluations.

Yet, with the expansion of ILP and increasing incorporation of patrol in these interventions, it has become increasingly critical to understand how patrol-driven ILP operates. This is especially true given that patrol is the backbone of police departments. Not only do they typically represent the largest segment of a given police population, but they are also the individuals who are most often working among the public and responding to calls related to crimes and other public concerns. In this way, patrol officers serve as the "eyes and ears of the law enforcement effort" (Peterson, 2005, p.11).

Given this role, patrol officers are uniquely situated to identify and collect relevant and contemporary information in the field that can then be developed into intelligence. Further, once intelligence has been developed, patrol can be utilized to disseminate and act upon this. Clearly, patrol officers are a group that should be incorporated into ILP strategies. This idea is especially pertinent if departments seek to maximize the effectiveness of ILP by fully integrating it at an organizational level in which an entire department will benefit ILP products and outcomes.

Due to the general lack of ILP patrol-driven efforts as well as the absence of evaluations, numerous areas need to be addressed. These include but are not limited to knowledge of how communication and information sharing operate within the context of a patrol-driven ILP approach, receptivity of different police stakeholders to such

approaches, and an understanding of how patrol-driven ILP approaches may impact tangible police measurables.

Currently, no known research has explored how communication and information sharing operate within a patrol-driven approach. Given that such approaches may prove to be beneficial, it is worthwhile to understand these with the possibility of future implementation into other departments. In addition to creating a basic understanding of knowledge in this area, this dissertation also provides an original contribution. It provides a unique look at how communication and information sharing occurs and what successful application of this looks like.

In regard to perceptions, no police organization has had their receptivity to a department-wide patrol-driven ILP program evaluated. Given that receptivity to innovative approaches is critical to their implementation and success, this dissertation provides a critical first assessment of this approach. Such knowledge is needed to determine the potential viability of patrol-driven ILP approaches being implemented in other departments. Additional insight into what factors may influence perceptions and receptivity is also provided.

Another area related to patrol-driven ILP approaches that have not been addressed is its impact on tangible metrics that are often utilized for assessing police department performance, namely productivity measures such as arrests, field interviews, and incident reports. Understanding how such policing activities may be impacted is a critical consideration for evaluating any policing innovation. This dissertation also extends this by considering how police proactivity is impacted, as this becomes increasingly relevant.

In addition to exploring the impacts of a patrol-driven ILP program on productivity and proactivity, this dissertation also considers other factors that may influence this.

Before exploring how each of these areas of interest will be, it is necessary to describe the patrol-driven ILP program examined in this study, the Phoenix Intelligence Officer Program. The following section provides an overview to provide the context for the forthcoming analyses.

The Phoenix Intelligence Officer Program (IOP)

Purpose

The IOP arose from a cooperative effort between the Phoenix Police Department (PPD) and Arizona State University (ASU). From the PPD side, this program has been spearheaded by the Phoenix Intelligence Center (PIC), which is part of the PPD's Homeland Defense Bureau (HDB). The PIC operates out of the Arizona Counter Terrorism Information Center (ACTIC) and is the main unit for processing intelligence for the PPD. Historically, there was somewhat of a disconnect between the HDB and patrol, but it was recognized that partnering together could substantially benefit both groups. For the HDB, patrol involvement provides a mechanism for creating a pipeline of current and relevant information that can be developed into intelligence. Patrol officers then benefit from having more resources and information on problems occurring within their precincts so that they can be addressed.

While both of the aforementioned groups benefit, the ultimate aim is to benefit the PPD as a whole. Simply put, the IOP aims to take a patrol-driven approach to make the PPD more intelligence-led. The plan was to accomplish this aim through a variety of steps. These included starting with the individual process of intelligence gathering, then

expanding focus on more group-level procedures, such as those focusing on problem-oriented and hot spots strategies, and then finally establishing an intelligence-led policing organizational framework.

The basic premise is that the program would start with the intelligence-gathering process by providing patrol officers with the training, resources, and infrastructure to identify and share intelligence. Ultimately, the aim would be to have sizable numbers of intelligence officers in each of the Phoenix Police Department's seven precincts to enhance their ability to gather, process, and share information. In doing so, trained patrol officers would also be better equipped to assist with special projects or interventions occurring within the precincts, such as targeted problem-solving projects. The more embedded these officers and the program becomes, the more that the PPD could operate under an intelligence-led policing organizational framework and thereby use efficient strategies to address a variety of crime issues. While many efforts have incorporated intelligence-led policing to varying degrees, there are no known cases in which departments have gone to such lengths to integrate ILP into the patrol function.

Intelligence Officer Reporting System

To facilitate the processing and sharing of information, the Intelligence Officer Reporting System was created to enable the PPD to create an interactive web of intelligence. The system was designed so that patrol officers who had received intelligence officer training could submit information on potential or ongoing cases that they deemed pertinent to issues that could benefit from further processing. This information would be submitted as intelligence officer reports (IORs). These reports contain narratives written by officers and answers to a variety of multichoice questions

and are submitted via a dedicated intelligence officer (IO) internal web page for each precinct. All IOs have access to all of the IORs submitted, so they are able to pass on relevant information to others in their precincts and assist with identified cases when they can.

The IORs submitted to date include a wide variety of case types, including but not limited to violent crimes, mental health issues, drug market activity, suspicious activity, and terrorist threats (Bottema & Telep, 2019). Regardless of case type, all cases are reviewed by either an intelligence analyst or dedicated patrol officer working out of the PPD's PIC. Depending on the nature of the report submitted, the PIC personnel will further process the cases if necessary, attempting to gather additional information on suspects when possible. As long as a lack of information did not stall a case, the PIC personnel would work with the submitting officer or forward the case to a specialized unit to be worked (e.g., robbery, homicide, etc.) or to ACTIC tips and leads if the case involved certain types of suspicious activity, such as threats to homeland security. Each report remains in the Intelligence Officer Reporting System for up to a year, after which it is deleted to comply with criminal intelligence system operating policies.

Participants and Training

The IOP began with a pilot program in October of 2014. Six patrol officers were selected and provided training and resources for intelligence gathering and problem-solving in the field. These officers were then removed from patrol and allocated to the Phoenix Police Department's PIC. They became known as the PIC intelligence officers (IOs). They were made responsible for providing intelligence assistance throughout the city and helping train the intelligence officers who would remain as patrol officers in the

precincts. In this way, the PIC IOs operated as what Rogers (2003) would refer to as the innovators in the diffusion of innovation model. Worth noting is that the number of PIC IOs has fluctuated due to the department's needs, and as of 2021, there are currently four active PIC IOs remaining.

However, the program's main focus was training officers to become “patrol IOs” who would do intelligence work while continuing to partake in patrol duties (e.g., responding to 911 calls). These selected officers would constitute what Rogers (2003) would refer to as early adopters, who would also be the champions relied on to demonstrate the program's benefits and advocate for its adoption. The initial plan was to train officers at one precinct at a time so that there would be a comparison group for examining impacts such as crime. Unfortunately, during the program's implementation, the PPD had a rebid process in which many special unit officers were sent to patrol, and many patrol officers were shuffled to different precincts. As a result, instead of training in a segmented and chronological fashion, officers from multiple different precincts were trained simultaneously.

While the training did not occur entirely as planned, between 2015-2018, over 220 officers attended a basic week-long intelligence officer school. This school covers a wide range of issues, including cartels, gangs, legal issues, social media investigations, human intelligence, and additional research databases that typical patrol officers do not have access to. The majority of those trained were patrol officers from each of the PPD’s seven precincts. The remaining personnel was from a variety of specialty units. However, it is important to note that while a large number of officers have been trained, there were issues with the level of participation in the program by some officers. Due to this, the

roster was consolidated in 2019. After an additional school at the beginning of 2020, the current number of intelligence officers is 82. The program's current focus is to maximize coverage of IOs across the precincts and the different shifts.

To expand on the basic intelligence officer school, an Advanced Intelligence Officer School was introduced in 2019 for top-performing IOs. These were the IOs who demonstrated a commitment to participating in the IOP, particularly regarding their contribution to both the daily logs and IORs. The daily logs consist of a voluntary system in which intelligence officers have been asked to keep track of how they have been utilizing the training and resources they provided as part of the basic intelligence officer school.

The Advanced Intelligence Officer School was attended by the PIC IOs and 20 select patrol IOs. It provided additional tools and resources, but it was mainly focused on problem-oriented policing approaches, namely the Scanning, Analysis, Response, Assessment (SARA) model (Eck & Spelman, 1987). This problem-solving model, which focuses on identifying and addressing specific problems and then evaluating interventions, was taught to better prepare officers to participate in intelligence-led crime reduction projects in patrol and provide them with the ability to identify and potentially address other problems within their respective precincts.

In doing so, advanced IOs became better equipped to utilize problem-oriented and hot spots strategies that could help develop the sought web of intelligence for the department as well as leading towards an ILP framework at an organizational level. In addition, the Advanced IOs became key liaisons for the IOP between their precincts and the PIC as well as champions for helping facilitate the diffusion of the program.

Evaluation to Date

Before highlighting the contribution that this dissertation will make, it is important to establish what has already been learned about the program. When the program was initially formulated, four key areas for evaluation were initially highlighted and supported by a Bureau of Justice Assistance grant, which has enabled the expansion and funding of evaluation efforts (Telep et al., 2018). The four key areas identified consisted of officer perceptions in terms of familiarity with the program, impacts on communication and information sharing, and general views; tangible outcomes in terms of differences in arrests, proactivity, and crime-solving; the ability of the Intelligence Officer Reporting System in developing actionable intelligence; and the impact on the development of actionable intelligence for addressing problem locations.

Perceptions

Thus far, initial evaluation efforts have examined two of these aforementioned areas. The first area addressed was perceptions. This area was examined by Telep and colleagues (2018) utilizing two waves of surveys collected in 2014 and 2015 of predominantly non-IO patrol officers and supervisors from the first precinct where the program was introduced. Regarding the perceptions relating to familiarity and communication, they found that respondents were familiar with IOs, with more than half seeing them at least a few times a week, yet less than a third communicated with them that frequently. That being said, most officers had exchanged information with intelligence officers, both in terms of giving and receiving. The majority of officers also viewed the program as a beneficial resource to patrol and believed it assisted with targeting repeat offenders and hot spots, conducting detailed investigations, and making

breakthroughs in cases. The only areas in which the IOP was not asserted to make any difference were enhancing the use of unassigned time or conducting crackdowns, stings, and other undercover operations.

Broadly, this study demonstrates that officers in the initial precinct the program was implemented in were largely supportive of and receptive to the intelligence officer program (Telep et al., 2018). However, while this initial insight is positive and helpful, the program has expanded citywide to include an additional six precincts. Due to this significant evolution, it is critical to gain more contemporary perceptions about the program. There would also be a benefit in incorporating a wider array of perspectives, something this dissertation will address.

Outcomes

In terms of evaluating tangible outcomes, namely, differences in arrests, proactivity, and crime-solving, only proactivity has been examined. These results were shared in a presentation by Telep and Ready (2016) that found that intelligence officers and those who communicated with them had higher proactivity levels than other patrol officers. More specifically, they found that officers in the program or those who were connected to program officers had higher levels of self-initiated activities. However, these were just preliminary findings from one precinct, which provides another area that I will address in this dissertation but with citywide data.

Intelligence Officer Reporting System

Another area of evaluative interest that has started to be addressed is the impact of the Intelligence Officer Reporting System. The foundation for this was established by Bottema's (2017) examination of 22 months of intelligence officer reports to see what

sorts of leads or cases were being addressed, what outcomes were occurring, and what factors were influencing these outcomes. Generally, he found a wide range of case types, and the most common outcome was that information was forwarded to another unit. Potentially salient factors that influenced the outcome of cases were the case categorization, the nature of the crime of the cases, and the perceived validity of the information that was entered into the intelligence officer reports.

A more finessed version of this approach was then taken by Bottema and Telep (2019), which included more years of data and better-differentiated case outcomes. This analysis had similar findings in terms of a wide variety of cases and salient factors for predicting outcomes; the only addition was that cases utilizing more methods of information gathering had a greater likelihood of success. While both these evaluations took good first steps, other mechanisms should be examined to assess the program's successes. More specifically, executive reports are a product that should be studied to see how program resources are being used and what success stories intelligence officers are sharing from this use.

Crime outcomes and problem locations

Other crime-related outcomes, such as impacts of the program on crime, have yet to be examined. As mentioned above, the re-bid process altered the way the program was implemented and prevented the existence of a comparison precinct for the sake of investigating crime differences. Due to this, assessing crime impacts will have to rely on intelligence officers' involvement in specific initiatives such as crime suppression projects instead of citywide assessments. Similarly, any evaluation efforts seeking to examine the impact of the IOP for addressing problem locations will need to wait for

opportunities in which they are dedicated to hot spots projects. While problem locations were a priority at the beginning of the program, this shifted with the PPD's prioritization of patrol and the resulting re-bid and focus on training intelligence officers citywide.

Overall, while there are some worthwhile initial evaluations of the PPD's IOP, most of the work on perceptions and outcomes has been more preliminary, with samples from only a singular precinct or small part of the project. Clearly, a broader and more all-encompassing evaluation is required, especially considering how the IOP has evolved. Further, the work examining intelligence activities, while more recent, still provides more of a foundation that necessitates further examination. This dissertation serves as an ideal opportunity to accomplish both of these feats.

Current Study

The current study serves as the first substantial evaluation of an effort to integrate intelligence-led policing into the patrol function. This exploratory evaluation examines three key areas related to the IOP and how some aspects of these may be related. The three areas of interest include communication and information sharing, the IOP's perceived value to the patrol function, and the impacts of the IOP on officer productivity and proactivity. The examination of these areas is guided by three broad research questions: 1. How do communication and information sharing function within the intelligence officer program, which information is prioritized for sharing and analysis, and how is the successful use of this information conceptualized? 2. To what extent do patrol officers, intelligence officers, and intelligence officer supervisors perceive the intelligence officer program to be valuable to patrol activities and the patrol function as a

whole? 3. How, if at all, has the intelligence officer program's training and resources impacted patrol officer productivity and proactivity over time?

Communication and Information Sharing in the IOP

The first question, exploring how communication and information sharing function and what information is prioritized, is critical for gaining a greater understanding of what a patrol-driven ILP initiative can look like. Understanding how the IOP operates is critical as it is only known department-wide patrol-driven ILP program. Focusing on this question provides an avenue for examining how frequently officers communicate and share information and how this was impacted by the introduction of a patrol-driven ILP program. In particular, this study will examine communication and information sharing between non-IOs and IOs, IOs with other IOs, and IOs with the PIC IOs. By ascertaining how both communication and information sharing is currently operating, it is possible to examine the extent to which engagement with the IOP has been adopted by patrol. Additionally, this focus also allows for identifying areas for improvement and suggesting practical changes for both the PPD IOP and the potential application to other departments.

This aim is also relevant for the second part of the question, which focuses on what information is prioritized for sharing and analysis and conceptualized as successful use of resources and training provided by the PPD IOP. One key approach for looking at prioritized information is delving into the Intelligence Officer Reports (IORs). The IORs are a key information-sharing mechanism between IOs and the method by which IOs select information for additional analysis by the PIC. By examining what types of information is provided in the IORs, it becomes possible to understand what information

may be prioritized for sharing by patrol IOs. Additionally, monthly executive reports will also be examined to explore what supervisors of the IO program have deemed as noteworthy successes stemming from the program. This assessment provides additional insight into where intelligence training and resources may be especially relevant or necessary.

Perceived Value of the IOP to the Patrol Function

The second question, focusing on perceptions of the extent to which the IOP is an asset to patrol, seeks to determine whether patrol officers, IOs, and IO supervisors view the program as having practical value. One could conceptualize this as addressing whether the IOP is a legitimate approach for increasing the efficiency and effectiveness of patrol activities. For the IOP to be embraced in patrol, it must be conceived as legitimate and pragmatic in terms of serving the interests of patrol.

Utilizing data from separate surveys of patrol officers, IOs, and IO supervisors, I specifically examine the program's perceived value to the patrol-related activities and the patrol function as a whole. Evaluating such perceptions is critical for understanding different stakeholders' receptivity for engaging in a patrol-driven ILP program. Receptivity to new approaches is critical for department investment and the success of the approach, as resistance to strategies can prevent them from being effectively implemented (Dent & Goldberg, 1999; Lurigio & Skogan, 1994). As police agencies and officers, in particular, tend to place greater emphasis on experience rather than on research (Lum et al., 2012; Palmer, 2011; Telep & Lum, 2014), it is critical to examine officers' buy-in to programs guided by research evidence. This assessment can help

evaluate the program's success and the possible viability of implementing something comparable in similar departments.

While perceptions of the program's value to patrol have been examined in one published work (Telep et al., 2018), these preliminary findings were limited to the initial precinct in which the program started and did not include the perceptions of the IOs. This study extends this work by incorporating views from all of the PPD's precincts and using separate surveys to examine patrol, IOs, and IO supervisors. The intent is to provide a much more holistic view of how an ILP patrol-driven program operates across an entire department.

In addition, this study also examines factors that may influence officer perceptions of the program to understand better the extent to which officers may be receptive to the IOP. It also explores views of those who were less supportive of the program to understand their concerns and identify potential areas for program implementation improvement.

Impact of the IOP on Productivity and Proactivity

The third question addresses whether the IOP impacted officer productivity and proactivity by determining whether there were changes to the tangible metrics representing police effectiveness. Using officer data activity data from the PPD's Crime Analysis and Research Unit (CARU), I examine whether receiving training from the PPD IOP produces any significant differences in productivity and proactivity.

For productivity, I examine whether receiving IO training and resources impacts the number of arrests, field interviews, and incident reports completed by IOs. While there are many ways in which police effectiveness can be measured (Moore & Braga,

2003; Sparrow, 2015), law enforcement organizations often focus on tangible metrics. Despite some arguing that traditional measures of police are not adequate as overall officer performance (Gorby, 2013), law enforcement organizations have consistently been concerned with how different strategies impact their bottom line.

Yet, it is not only official interest that makes it critical to understand what impacts the program may have on these measures, but also why it might have different impacts given its innovative approach. For example, has the program's training increased the efficiency of IOs and allowed them to make more arrests and write more reports? Alternatively, has the IO's training led them to more focused and perhaps fewer but better-quality arrests? Clearly, neither potential increases nor decreases in the aforementioned productivity measures are inherently positive or negative but understanding the program's impacts in either direction is useful.

The same need is also present for examining the impacts of the IOP training on proactivity. Proactive policing practices are becoming increasingly relevant in the United States with growing evidence that certain related efforts can be effective at reducing crime (National Academies of Sciences, Engineering, and Medicine, 2008). To explore the concept of proactivity, I analyze whether receiving IOP training and resources has any impact on the frequency of IO self-initiated activities. This analysis builds on initial work conducted by Telep and Ready (2016) examining the impact of the IOP on proactivity in one precinct, which found support for the idea that the program increased proactive activities. This assessment is extended by examining officers who had received IO training across all seven of the PPD's precincts and multiple years.

To further understand the impacts of the IOP on productivity and proactivity, the results from the analyses will be compared to officer perceptions regarding the program's impacts. For example, the trends in arrests and proactive activity can be compared to perceptions regarding impacts on arrests and the use of unallocated time. This approach is important as it helps to ascertain the extent to which perceptions regarding impacts of the program are reflected in tangible outcomes. In addition, this study also examines factors that may potentially influence officer productivity and proactivity to provide additional insight into what may help explain variation in IO's contributions.

CHAPTER 3

METHODOLOGY

This chapter addresses the sources of data and methodology utilized to examine communication and information sharing in the IOP, perceptions regarding the program's value to patrol, and its impact on both productivity and proactivity.

Communication and Information Sharing in the IOP

Data

The data for examining communication and information within the IOP comes from a variety of sources. This data includes surveys of patrol officers, IOs, and IO supervisors, as well as IORs, and executive reports.

Patrol, IO, and IO supervisor surveys

One data source is three surveys administered to patrol officers, intelligence officers, and intelligence officer supervisors. These surveys were designed as part of the evaluation funded by the Bureau of Justice Assistance. The surveys targeted PPD's patrol officers (see Appendix A), the intelligence officers (see Appendix B), and the immediate supervisors of the intelligence officers (see Appendix C). The surveys provide information regarding communication and information sharing between non-IOs and IOs, IOs with other IOs, and IOs with the PIC IOs. They also provide impressions on the impacts of the IOP and how this influenced communication and information sharing in the department.

Patrol survey

The patrol survey took place in Fall 2019 and targeted all patrol-level officers in all seven of the PPD's precincts. The survey was intended to provide insight on patrol

officers' perceptions of and interactions with the intelligence officers and the intelligence officer program. The survey was administered by advanced intelligence officers who attended patrol briefings. They were equipped with a recruitment script and provided consent documents to minimize the chance of officers feeling obligated to take the survey. The surveys took about 10 minutes to complete. During the briefings, 617 surveys were collected from the 721 officers present, resulting in an 85.6% cooperation rate. Of these, 588 were patrol officer respondents, representing 59.4% of the PPD's roughly 990 patrol officers. As a separate survey was conducted for IOs, any identified IOs were removed from this sample, resulting in a final sample of 568 officers. Personal demographics were not requested in the survey to maximize the response rate. Further, other preliminary survey efforts conducted regarding the program showed no significant differences due to such factors.

In regard to work-related demographics, the sample contained a representation of all of the PPD's seven precincts, with all but the 500 precinct making up at least 9.5% of the respondents (see Table 3.1). The 500 precinct is a small precinct that serves the downtown Phoenix area. With the exception of the 500 precinct, there seems to be a sufficiently high response rate to start drawing conclusions about non-IO patrol officer views of the IOP. Also worth noting is that the sample provided representation of all of the PPD's patrol shift assignments. Within the sample, 28.1% worked the day shift, 42.4% worked the swing shift, and 29.2% worked on the grave shift. The remaining 0.4% worked an "other" non-traditional shift. In addition, the sample also covers patrol officers who have been working for various lengths of time, from less than three months (7.6%) to more than a year (73.7%).

Table 3.1 Response Rates of Patrol Officers by Precinct

Precinct	Patrol Respondents n	Patrol Personnel n	Patrol Response Rate (%)	Non-IO Respondents n	Precinct Representation (%)
200	56	137	40.9	54	9.5
400	107	108	99.1	107	18.8
500	13	48	27.1	12	2.1
600	97	204	47.5	92	16.2
700	133	159	83.6	127	22.4
800	96	187	51.3	93	16.4
900	86	147	58.5	83	14.6
Total	588	990	59.4	568	100.0

Intelligence officer survey

The intelligence officer survey is an online survey that was conducted between September and December 2020. It was sent to intelligence officers who were certified and operating as of September 2020 (n=81). The purpose of the survey is to gain insight into perceptions of the intelligence officer program and to gauge the extent to which IOs thought they were participating in the program. The survey also included additional questions for advanced intelligence officers to obtain their opinions about the advanced training school and whether they had any additional recommendations for future iterations. Given the many unique challenges of 2020, officers were also asked how challenges impacted their IO duties and activities. The survey took roughly 15 minutes to complete. A total of 57 unique responses were received, equating to a response rate of 70.4%. This sample included responses from IOs in every precinct and some from some specialty units (see Table 3.2). The majority of these respondents were patrol officers (71.9%) or detectives (14.0%), with two sergeants and six officers filling other roles. The sample includes IOs assigned to all of the PPD's different shifts. As with the patrol officer sample, all but the 500 precinct had sufficient representation.

Table 3.2 Intelligence Officers' Precincts

	N	%
200	6	10.5
400	7	12.3
500	2	3.5
600	7	12.3
700	7	12.3
800	7	12.3
900	7	12.3
Other/Specialty Unit	14	24.6
Total	57	100.0

Intelligence officer supervisor survey

The intelligence officer supervisor survey is an online survey that was conducted between September and December of 2020. It was sent to the immediate supervisors of intelligence officers certified and currently operating as of September 2020 (n=67). The purpose of the survey was to gain insight into the supervisors' perceptions of and familiarity with the intelligence officer program and their feedback on what they would like to improve or learn more about. The survey took roughly 15 minutes to complete. A total of 27 unique responses were received, equating to a response rate of 40.4%. This sample included responses from 24 sergeants and three lieutenants. These data included at least two supervisors per precinct and four from other/specialty units (see Table 3.3).

The sample includes supervisors with varying levels of experience, with 30.8% being supervisors for less than six months, 30.8% having at least two years of experience, and the remainder falling somewhere in between. In terms of their experience with supervising IOs, 80.8% of the respondents reported currently having an Intelligence Officer on their squad. While it was expected that all respondents would have at least one IO, IOs may have transferred from their supervisor's squad by the time of the survey.

There were also a few cases in which the only IO on a squad was the supervisor responding to the survey. Of those who currently supervise an IO, 65% had one IO, 30% had two IOs, and one supervisor reported having three. IO supervisors had these IOs on their squads for varying lengths of time. The most common responses were 7-12 months (45.5%) and at least 18 months (36.4%), suggesting that in most cases, supervisors had oversight over an IO for more than half a year.

Table 3.3 Intelligence Officer Supervisors' Precincts

	N	%
200	2	7.4
400	4	14.8
500	3	11.1
600	3	11.1
700	5	18.5
800	4	14.8
900	2	7.4
Other/Specialty Unit	4	14.8
Total	27	100.0

Intelligence Officer Reports (IORs)

To address what information is being prioritized for sharing and analysis, this study also examines the IORs submitted by IOs (see Appendix D). As outlined in the IOP program background, the IORs provide a mechanism for IOs to provide information on potential or ongoing cases that they deemed pertinent to issues that could benefit from further processing. In this way, they represent a key information-sharing mechanism between IOs and the method by which IOs select information for additional analysis by the PIC. By examining these reports, it becomes possible to see what types of information are prioritized for sharing by IOs.

From when the IORs system was implemented in April 2015 through the end of 2020, 1791 IORs were submitted. Of these, 1515 were produced by 178 different patrol IOs. The range in the number of IORs submitted per officer was substantial, going from 1 to 140, with a median value of 4. Worth mentioning is that both the total and median number of IORs per officer fall far below the original goal of having each IO submit two IORs a month. Despite this, the IORs do offer unique insight into prioritized information.

Executive Reports

Another data sources for this section are the IOP executive reports. Throughout the time that the IOP has been implemented, the sergeant heading the unit has been required to submit monthly executive reports tracking the program's contributions. These reports are largely generated from the daily logs system. This system is a voluntary mechanism by which intelligence officers can keep track of how they have been utilizing the training and resources that they were provided as part of the basic intelligence officer school. The reporting categories for this include suspects identified, arrests contributed to, and intelligence officer reports submitted.

However, of most interest to this study is that the daily logs also give IOs the opportunity to share success stories regarding how they have successfully used their training and resources. Such stories typically included a description of how resources were used to address a specific crime or problem and the outcome that arose from these efforts. The success stories were initially utilized to justify the expansion of the program and then continued to showcase the value of devoting resources to the program. Certain stories are selected by the sergeant in charge of the IOP program to include in the monthly executive reports. Worth noting is that prior to the daily logs system being

implemented, sergeants reported success stories based on the feedback shared with them by officers or their supervisors.

From November 2014 to December 2020, there were 520 success stories reported by the sergeant responsible for the IOP at the ACTIC. Of these, 247 involved patrol IOs as opposed to dedicated PIC IOs. As the focus of examining the success stories is to understand how success is conceptualized for patrol-driven intelligence efforts, only those involving the patrol IOs are considered. By examining the success stories included in the executive reports, there is potential to gain a greater understanding of what is conceptualized as being successful use of the program, its resources, and the communication and information sharing it encourages.

One limitation in examining success stories from the daily logs that should be recognized is that most intelligence officers do not submit daily logs. With the peak number of intelligence officers occurring in 2019 (N= ~220), only 53 intelligence officers used this system, with an average of 75 total daily logs a month. It is also important to note that only 11 officers submitted more than 20 logs for the year, with the three top submitters submitting at least 110. This finding would suggest that successes are drastically underreported. However, it is worth acknowledging what this smaller sample of intelligence officers are accomplishing and what their supervisors deem as noteworthy successes.

Measures

Patrol, IO, and IO supervisor surveys

In terms of communication in the field, questions of patrol officers and intelligence officers include how frequently they see IOs on duty and how often they

communicate with IOs either in person or by email, text, phone, or radio. The options for the responses to these items include daily, weekly, monthly, and less than once a month, and they are coded from 1 to 4 from least to most often. These answers can be compared to provide a general baseline for assessing how often patrol and intelligence officers communicate.

In addition, patrol officers were also asked how often they sought assistance from each of the IOs in their precinct. For each IO, officers responded on a 5-item frequency scale coded from 1 to 5 and consisting of not at all, infrequently, occasionally, frequently, and very frequently. As the specific individuals and number of IOs varied by precinct and would have worked various shifts, an additional binary variable representing IO assistance frequency was created. This variable reflected whether patrol officers requested assistance from at least one IO in their precinct frequently or very frequently. These values were selected due to the importance of understanding how many officers consistently engaged with the program.

In terms of the specific impact of the IOP on communication, both intelligence officers and their supervisors were explicitly asked how the IOP had impacted communication between officers. This answer is coded from 1 to 4, reflecting decreased, no change, increased, and greatly increased, respectively. The results of this serve to directly address the extent to which the IOP is perceived to be beneficial in its impact on communication at the patrol level.

In addition to this more general communication, both patrol officers and intelligence officers were asked to identify how often they provided and received information from intelligence officers. Patrol officers were asked this in terms of calls,

incidents, cases, or crime issues. In contrast, IOs were asked about their communication concerning criminal cases, hot spots, repeat offenders, or recurring victims/targets. In both cases, the answers were relative and included infrequently/rarely, occasionally, frequently, or very frequently. These responses are coded from 1 to 4 from least to most often. These answers will be compared to provide general views of both patrol, and intelligence officers on information sharing facilitated or contributed to by the intelligence officer program.

In addition, one item sought to determine the perceived impacts of the IOP on information sharing. Both intelligence officers and supervisors were asked how the IOP had impacted the amount of information sharing between officers. This answer is coded from 1 to 4, reflecting decreased, no change, increased, and greatly increased, respectively. The results of this will be assessed to address the potential impact of the IOP on information sharing.

Another area of interest for communication and information sharing is how often patrol officers and intelligence officers interacted with the Phoenix Intelligence Center spearheading the IOP initiative. Several items from the surveys explore this. First, one item examines the frequency with which patrol officers contacted the PIC for any reason. Coded 1-5 from least to most often, responses included not at all, infrequently, occasionally, frequently, and very frequently. A similar question was asked of the IOs, but this was on a slightly different scale. This item asked how frequently they communicated with personnel at the PIC. Answers were represented by four response categories coded from 1-4 from least to most often. The categories included less than once a month, monthly, weekly, and daily.

In addition, another question asked how often patrol officers and IOs requested assistance from each of the permanent PIC IOs. This item operated on the same 5 tier frequency scale from not at all to very frequently. To further examine how often individuals received assistance from PIC IOs, an additional binary measure of PIC assistance frequency was created. This binary variable is constructed the same as the one looking at interaction with patrol IOs. It indicates whether patrol officers or IOs received assistance at least frequently from at least one PIC IO.

Intelligence Officer Reports (IORs)

As earlier mentioned, the objective for examining the IORs is to explore what types of information are prioritized for sharing between the IOs and the PIC. For the purposes of this study, the two key measures of interest from the IORs are the categorization of incidents and the nature of the activities of interest. Important to note, there can be multiple responses for each of these measures in each IOR. Categorization indicates whether the IORs were related to a criminal group/repeat offender, recurring target, crime hot spot, or specific case. Of the 1515 IORs submitted by patrol IOs, 1189 (78.5%) included the categorization, and 93 (5.0%) of these reported multiple categorizations in one report. This breakdown resulted in a total of 1258 categorizations being reported. Knowledge of these categorizations helps provide a general understanding of how IO training and intelligence resources were used.

This focus on categorization is supplemented by the nature of crime, indicating what types of crime were focused on. Potential options include terrorist threat, drug market activity, person-on-person violence, property crime, public disorder, suspicious activity, and other. Due to the number of cases that fell under the other group, additional

categories were also added. These included criminal groups, sex-related offenses, suicide, threats, traffic, warrants, weapons, and welfare. Of the 1515 IORs submitted by patrol IOs, 1379 (91.0%) reported the nature of crime, and 373 (27.0%) of these reported more than one. This inclusion of multiple criteria resulted in 1843 items for the nature of crime being reported. The focus on the different crime types highlights where IO training and resources may be most applicable.

Executive Reports

The key area of interest for the executive reports is the officers generated success stories selected by the IOP sergeant. The purpose of examining the success stories is to identify what the IOP perceives as a noteworthy success.

Three measures are utilized for examining the success stories, each of which was coded from the success story narratives. The three measures of interest are case type, intelligence actions, and disposition. Case type was a broad classification of crime type in the reported success story. Categories for this variable included barricades, disorder/threats, drugs, firearms, gangs/cartels, missing person/welfare/suicide, multiple/other, property, sex crime, traffic, violent crime, and warrants.

The second measure, intelligence actions, examined how resources and training were utilized. This measure consisted of four categories: suspect workup/ID/location, subject workup/ID/location, victim workup/ID/location, and patrol. The workup categories involved identifying individuals or creating a profile of relevant information to be utilized for a given case. The patrol designation was used when a success story was related to typical patrol duties that did not specifically mention requiring IO training or

resources. Other is a catchall category for any cases that did not fit any of the previously mentioned categories.

The final measure, disposition of cases, examines the contribution of patrol IOs to the success stories at the time they were reported. It is important to note that a number of the cases addressed were still in progress or did not have a finalized outcome. The four categories for dispositions were arrest, information dissemination, located child/family/home/subject, and other. Arrests included all success stories in which an arrest was made at least in part due to an IO contribution, but it did not have to be the IO making the arrest. Information dissemination occurred when IOs conducted workups and provided information to other officers or specialized units to assist them with cases. The located child/family/home/subject variable was related to when missing individuals, other than criminal suspects, were located, such as missing persons or suicidal subjects. Other is a catchall variable for cases that did not fit the aforementioned categories.

Analytic Strategy

The overarching approach of the investigation of communication and information is largely exploratory. As the first examination of this topic for a patrol-driven ILP effort, the analytic strategy focuses on predominantly descriptive analysis. To address how communication and information sharing function, what information is prioritized, and how successful use of information is conceptualized, various approaches are utilized to address the three key data sources.

Patrol, IO, and IO supervisor surveys

The surveys of patrol officers, IOs, and IO supervisors are examined to provide the overarching view of communication and information sharing. The first component of

this is establishing how often patrol officers engage with intelligence officers. This approach involves examining how often they see, communicate with, and ask IOs for assistance. Following this is an assessment of how IOs and IO supervisors perceived that the IOP impacted communication. After examining communication more broadly, the views of both patrol officers and IOs will be compared in regard to how often they each give and receive information from each other. This action is taken to establish both how common information sharing is perceived to be and whether this is viewed consistently across groups. Similar to communication, an assessment of the impact of the IOP on information sharing will also be addressed. The final component of examining communication with the program is assessing the frequency with which precinct officers and IOs communicate with the PIC and PIC IOs. This examination allows insight into the level of communication with the main hub of the IOP.

Intelligence Officer Reports (IORs)

The IORs are valuable for analysis as they provide insight into what information is prioritized for sharing. The examination of the IORs consists of general descriptive analysis, which provides an overview of both the case categorizations and the nature of activities that were present within these reports.

Executive Reports

The executive reports are valuable for gaining an understanding of what supervisors of the IOP conceptualize as successful use of program training and resources. The examination of the executive reports entails a general descriptive analysis of the success stories in the executive reports. Specifically, this examines the types of cases

most frequently associated with success, what relevant intelligence actions were taken in these, and what contribution patrol IOs made, as indicated by the story disposition.

Perceived Value of the IOP to the Patrol Function

Data

Patrol, IO, and IO supervisor surveys

The data for examining the perceptions of the program's value and thereby receptivity of PPD stakeholders to the IOP was taken from the three aforementioned surveys of patrol officers, IOs, and IO supervisors. These data speak to views on how these groups believed the IOP impacted police activities and how valuable the program was more holistically. The survey also included questions on a variety of factors that could potentially shape these different perceptions.

Measures

Impact of IOP on patrol-driven activities

The assessment of the program's perceived impact on different policing activities comes from all three of the aforementioned surveys. All three sets of individuals were asked whether the IOP greatly improved, improved, had no difference, or made worse a variety of policing activities. The responses are coded from 1 to 4, from made worse to greatly improved. The policing activities addressed that were the most relevant to the patrol function were: “the ability to gather intelligence on repeat offenders and crime hot spot locations,” “the ability to conduct detailed and thorough investigations,” “the ability to make breakthroughs (e.g., identifying suspects) in cases leading to an arrest,” and “the ability to make efficient use of unassigned time.”

These measures serve as direct tests of whether the three groups of policing personnel perceived the IOP to impact patrol activities. As such, the statements were combined and averaged to create the "Patrol Activities Value" variable. To verify that it was appropriate to combine these items to represent patrol activities, Cronbach's alpha tests were run for each of the three samples. The resulting alpha values for the three samples were 0.922 for patrol officers, 0.757 for intelligence officers, and 0.833 for supervisors of intelligence officers. Such results suggest it would be reasonable to combine these items into a scale representing patrol activities to be compared across the three samples. By comparing the three groups, it should become clear how the IOP is perceived to impact and potentially improve various patrol activities. This assessment is, once again, a measure of perceived benefit, receptivity, and support for the program.

Impact of IOP on the patrol function

Data from all three of the earlier mentioned surveys are also used to assess the overall perceived impact of the IOP on the patrol function. The section examines the level of agreement regarding statements related to the program as a whole. The five statements examined are: "the IO program is a good resource for patrol officers," "the IO program has been helpful to, or benefited, me personally," "having IOs working in the field makes the job easier for patrol officers," "the benefits of the IO program outweigh the costs," and "the IO program takes valuable resources away from patrol." The potential responses to these questions are measured on a Likert scale from strongly disagree to strongly agree (coded 1-4), except for the final statement regarding resources, which is reverse coded.

Together, these measures serve to represent the different stakeholders' views on the IOP overall. As such, the responses to each statement were combined and averaged to create the "Patrol Function Value" variable. To verify that it was appropriate to combine these items to represent the program's perceived overall impact on the patrol function, Cronbach's alpha tests were run for each of the three samples. The three samples' resulting values were 0.775 for patrol officers, 0.641 for intelligence officers, and 0.859 for supervisors of intelligence officers. While the alpha value for the intelligence officers would typically be considered too low, it was determined that this was caused by one response with several outlier values. When this response was excluded, the alpha value rose to 0.745. Due to this, it was determined that the combination of variables was reasonable to use. The case outlier was not excluded from the analysis in order to avoid the introduction of unnecessary bias.

Overall, such results suggest it would be reasonable to combine the aforementioned items into a scale representing broader perspectives on the IOP to be compared across the three samples. By comparing the three groups, it should become clear the extent to which they believe that the IOP may be benefitting the PPD's patrol function. This section is perhaps the most direct in evaluating perceived benefits from, receptivity to, and support of the IOP.

Patrol Officer Characteristics

In addition to examining perceptions regarding the impact of the IOP on patrol activities and the overall patrol function value, it is important to identify factors that may influence these perceptions. Of particular interest are the perceptions of patrol officers. In relation to patrol officers, there are ten variables of interest that may potentially impact

their perceptions. These can be classified into three categories: work attributes, awareness of the IOP, and engagement with the IOP.

Work attributes consist of the officers' precinct and shift, as it is possible that the location they work in and the time they work may influence their exposure to and opinions of the program. Officer precinct is a nominal variable that includes the seven PPD precincts (200, 400, 500, 600, 700, 800, and 900). The 200 precinct is excluded as the comparison category for this variable when examined in regression models, which will be discussed further below. Shift is also a nominal variable, which includes day shift, swing shift, and grave shift. Day shift is excluded as the comparison category for this variable.

Awareness of the IOP is represented by both the reported familiarity that patrol officers have with the program and the PIC and how well they understand the role of IOs. The IOP and PIC familiarity variables are ordinal, consist of "not familiar'" "somewhat familiar," and "very familiar," and are coded from 1 to 3. The understanding of the role of IOs is a simple binary variable consisting of yes or no.

Engagement with the IOP is examined in terms of how often patrol officers communicate with IOs, exchanged information with them, and contacted them for assistance at an incident. The frequency with which patrol communicates with patrol IOs is categorical variables with categories including "less than once a month," "a few times a month," "a few times a week," and "a few times a day," and is coded from one to four. While there is also a variable for communication frequency with the PIC in the survey, this is not included due to multicollinearity issues with the PIC familiarity variable.

The frequency with which patrol exchanges information is examined by combining the two variables that examine how often they perceive they provide and receive information from IOs. These original variables are coded 1 to 4 from least to most frequently and consist of "infrequently," "occasionally," "frequently," and "very frequently." The new information sharing variable is the mean of these two original variables, which indicates how often patrol officers perceive to be involved in information sharing with IOs more generally.

The frequency with which patrol has requested patrol IOs assistance is an ordinal variable coded from 1 to 4 and has response categories of 0, 1, 2-5, and More than 5. To further examine patrol officers requesting IO assistance, two variables created for the communication and information sharing section to identify officers frequently requesting IO assistance are utilized. More specifically, the binary variables examine whether patrol officers request at least frequent assistance from at least one patrol or PIC IO, respectively.

Patrol Officer Comments

One final measure examined regarding perceptions is patrol officer comments regarding the IOP. As the IOP's impact on patrol is a key focus for the program, this was the feedback that was going to be prioritized for this study. In terms of the measure itself, comments were taken from a survey item that asked officers to provide any additional comments or feedback about the IOP. For this measure, only comments from patrol officers who had a patrol activities value score below 3 (n=189) or a patrol function value score below 3 (n=151) were included. Such scores would indicate that, on average, the respondents did not report believing that the IOP improved patrol activities or that they

more often disagreed than agreed with the idea that the program added value to patrol as a whole. Of those who fell into these categories, only 46 provided comments. It is believed that examining these officers' additional views is important as it may allow for an understanding as to why officers may not be receptive to a patrol-driven ILP approach and may also help inform potential future efforts to implement similar programs.

Analytic Strategy

The approach for this section examining the perspectives of patrol officers, intelligence officers, and intelligence officer supervisors consists of three different steps. The first entails an exploration of the general perspectives of these groups by comparing means for the aforementioned patrol activities and patrol function value variables. This analysis starts with a descriptive comparison and then a Kruskal-Wallis test for each combined variable to see any variation between the groups in these areas is statistically significant. If such differences are found, the Dunn's posthoc test will be conducted to determine which of the three groups differ significantly from each other. This initial step provides an overall view of the different group's receptivity to the PPD's IOP and, perhaps more broadly, to potential patrol-driven intelligence initiatives.

The second step seeks to identify whether certain factors help predict potential variation in the perspectives. Of particular interest will be the perspectives of the patrol officers. This focus is for both theoretical and statistical reasons. From a theory perspective, the IOP's application to patrol is a key outcome of interest, and broad receptivity to the program at the patrol level is critical to its success. Thus, patrol perspectives are particularly pertinent and a key focus point. In terms of the statistical

elements, the patrol sample provides both the largest group and the one with the most variation in the range of variables of interest and highest standard errors.

Linear regression models will be used to examine the aforementioned patrol officer work characteristics, awareness of the IOP program, and engagement with the IOP to see if and to what extent such factors may influence their perceptions. For the purposes of the regressions, the ordinal independent variables included in the model will be treated as continuous to provide a more overarching view of the impact and direction of the effects of these variables. Each of the three earlier mentioned groups of factors will first be assessed separately and then as combined models for both patrol activities value and patrol function value.

The final step involves a brief examination of patrol officers' comments who had either a patrol activities value or a patrol function value score below 3. This exploratory qualitative assessment seeks to see if any common comments or concerns provided insight into their relatively lower perception scores.

Impact of the IOP on Productivity and Proactivity

Data

The data for examining the impact of the IOP on productivity and proactivity comes from monthly behavioral data provided as PDFs by the PPD's Crime Analysis and Research Unit (CARU). These data were all manually transferred into a dataset where the relevant means were calculated for each officer's activity a year before and after they received their training. These data contained output information for all PPD personnel who had received intelligence officer training by the end of 2020 (n=240). As patrol officers are the key focus of this study, PIC IOs, non-patrol personnel, and those working

for specialized units were dropped from the sample. Additionally, those IOs who attended the most recent school at the beginning of 2020 were dropped as data were not available to look at these officers a year post their training. This modification resulted in a final sample size of 162 patrol officers.

Measures

Productivity

Productivity will be examined to assess whether being an intelligence officer alters officers' productivity in terms of key tangible patrol outputs. This assessment will be made regarding the impact of the IOP training on official officer activities, namely arrests, field interviews, and incident reports. There are two count variables for each activity, accounting for the 12 months before each IO being trained and the 12 months after. The variable for the prior 12 months is utilized as a control variable in multivariate models. It is important to note that the counts for these measures represented when the officers involved were the primary officers on the arrests, field interviews, or incident reports.

Proactivity

Proactivity is examined in a similar way to the productivity measures. Instead, it focuses on self-initiated calls in which patrol officers proactively perform patrol activities rather than being dispatched to 911 calls. These include activities such as vehicle or subject stops, which together made up 49.1% of the self-initiated calls reported by the PPD’s patrol officers in 2020. There are two count variables for self-initiated calls, one accounting for the 12 months before each IO being trained and the other for the 12 months after. The variable for the prior 12 months is utilized as a control variable. The

examination of the post-12-month value for self-initiated calls seeks to ascertain whether receiving intelligence officer training impacts patrol officer proactivity.

Control Variables

When exploring how the IOP may impact productivity and proactivity, additional potentially relevant variables are also controlled for in addition to the pre-training values of output variables mentioned above. The additional variables include whether the officer is a current IO, what year they received their training, what precinct they worked in, and how many calls they were dispatched for the 12 months following their training. The current IO variable is binary and measures whether the officer is considered active in the IOP. As previously mentioned, the number of IOs was consolidated due to the lack of participation of some officers in certain program elements. The training year variable is categorical and accounts for which year the officer attended the basic intelligence officer school. The reference category is the earliest year, 2015. The examination of the training year was to help account for potential circumstantial differences between years and minor variations in training schools. Further, such a measure may also help account for larger changes in the department that may have longitudinal impacts, e.g., de-policing in response to public criticism.

The precinct variable is categorical and measures which of the seven precincts the officer worked in when they attended the basic intelligence officer school. Unfortunately, data on whether the officer served in a different precinct during the study period was unavailable. However, it is worth noting that this limitation is partially overcome by the final control variable, which controls for the number of calls that officers were dispatched to in the 12 months following their training. If officers moved to a more or less busy

precinct, this could be captured by this variable. More importantly, however, the dispatched call variable helps account for how busy patrol officers were and their level of opportunity to engage in behaviors related to both productivity and proactivity.

Analytic Strategy

For both productivity and proactivity, the first key strategy will consist of conducting pairwise *t*-tests for all patrol officers with a precinct designation and trained by the beginning of 2019. This assessment will be used to compare their production for the 12 months before attending the basic intelligence officer school and 12 months after to see if there were significant changes in their tangible behavior metrics. The relative magnitude of these changes will be estimated utilizing Cohen's D values (see Cohen, 1988). These approximations include small, medium, and large effects, which equate to values of 0.2, 0.5, and 0.8, respectively.

In addition to the paired t-tests, the Wilcoxon sign-ranked tests were also conducted to compare the data from the periods before and after IOP training. While the paired t-tests can illustrate the average change, these tests provide a more in-depth look at how many officers increased or decreased behaviors related to productivity and proactivity over time. Accounting for these differences provides additional insight and helps to avoid overreliance on comparing means that can be impacted by extreme values.

To further extend the *t*-test and Wilcoxon sign-ranked test results, linear regression models will be utilized to examine the impact of being an IO on productivity while also accounting for other potentially influential factors. As previously mentioned, these include the activity of the output of interest for the year before their training as well as whether the officer is a current IO, what year they received their training, what

precinct they worked in, and how many calls they were dispatched for the 12 months following their training.

Outline of Remaining Chapters

Following the conclusion of this chapter, each of these identified areas of interest will have their results addressed individually in the following three chapters. More specifically, Chapter 4 will address communication and information sharing, Chapter 5 will explore perceptions of the IOP's value, and Chapter 6 will address the impact of the IOP on officer productivity and proactivity. The findings and implications of these chapters will then be collectively addressed in greater depth in Chapter 7.

CHAPTER 4

COMMUNICATION AND INFORMATION SHARING IN THE IOP

Results

Communication and Information Sharing

This section provides the first examination of how communication and information sharing operates in a patrol-driven intelligence-led policing program. It addresses perceptions regarding communication between patrol and IOs, the information sharing that occurs between these groups, and the communication between the PIC and both patrol and IOs.

Communication between patrol officers and IOs

This section begins by addressing both the perceived opportunity for patrol to communicate with IOs and how frequently patrol officers believe this occurs (see Table 4.1). Generally, there seems to be a decent amount of variation in the frequency with which patrol recall seeing IOs on their shifts. For example, while 15.7% report seeing them daily, a little more than a third (35.7%) report seeing them less than once a month. Such results suggest that there is currently perceived to be some disparity in how common or present IOs are within the department due to exposure differences. Important to note, however, is that the frequency that patrol officers see IOs on duty does not correspond to how often they communicate with them. Patrol officers report communicating with IOs significantly less frequently than how often they see them, with over half (56.3%) communicating with IOs less than once a month.

Table 4.1. Patrol Perceptions on Communication Frequency with IOs

	Less than once a month (%)	A few times a month (%)	A few times a week (%)	A few times a day (%)
How often do you see one or more IOs when you are on duty? (n=555)	198 (35.7)	129 (23.2)	141 (25.4)	87 (15.7)
How often do you communicate with one or more IOs either in person or by email, text, phone, or radio? (n=558)	314 (56.3)	104 (18.6)	86 (15.4)	54 (9.7)

To further explore the frequency with which patrol officers communicated with IOs, an assessment was made of how often they interacted with IOs dedicated to their precinct. As explained in the methodology section above, an assessment was made about how many patrol officers reported receiving assistance from at least one of their patrol IOs on a frequent or very frequent basis. Interestingly, 44.5% of patrol officers met these criteria. Additionally, 20.3% of all patrol officers were in at least frequent contact with more than one patrol IO. It is important to note that there was a clear variation in the frequency of contact according to the patrol officer precinct (see Table 4.2). More generally, these findings distinctly contrast the amount of interaction that patrol officers perceive to have with IOs more broadly.

Table 4.2 Number of Patrol Officers with at Least Frequent Contact with Patrol IOs

Precinct	Patrol IOs	0 IOs (%)	1 IO (%)	2+ IOs (%)	Total (%)
200	7	36 (70.6)	12 (23.5)	3 (5.9)	51 (100.0)
400	6	45 (44.1)	35 (34.1)	22 (21.6)	102 (100.0)
500	3	6 (60.0)	1 (10.0)	3 (30.0)	10 (100.0)

600	13	48 (53.9)	18 (20.2)	23 (25.8)	89 (100.0)
700	9	60 (48.8)	35 (28.5)	28 (22.8)	123 (100.0)
800	7	58 (63.0)	18 (19.6)	16 (17.4)	92 (100.0)
900	6	51 (63.0)	14 (17.3)	16 (19.8)	81 (100.0)

In addition to understanding how communication is occurring between IOs and patrol, it is also important to be aware of whether the IOP is believed to be impacting the frequency of communication. Both IOs and IO supervisors were asked related questions regarding this, with IOs being asked how the IOP had influenced the frequency of communicating with other officers, and supervisors being asked what they thought the impact of the program was on communication in patrol (see Table 4.3). The majority of both IOs (89.2%) and IO supervisors (70.7%) reported believing that the IOP had increased, if not greatly increased, their communication or communication within patrol, respectively. The remainder of the individuals in each sample reported that the IOP had no change in communication. Still, it is also worth noting that no one in either sample believed that the program had a negative impact on communication. Overall, perceptions generally indicate that the IOP did have a positive impact on communication.

Table 4.3 Perceived Impact of the IOP on Communication

	Decreased (%)	No Change (%)	Increased (%)	Greatly Increased (%)
Intelligence Officers (n=57)	0 (0.0)	9 (15.8)	29 (50.9)	19 (33.3)
Intelligence Officer Supervisors (n=27)	0 (0.0)	8 (29.6)	10 (37.4)	9 (33.3)

Information sharing between patrol officers and IOs

In addition to communication, another staple of ILP is information sharing. While measuring the sharing of information between patrol and IOs is not feasible, it is useful to get perceptions from patrol and IOs about the frequency with which this occurred (see Table 4.4). This is assessed in terms of information sharing related to criminal cases, hot spots, repeat offenders, or recurring victims/targets. Also relevant to note is that perceptions include the frequency with which information was given and received by the two groups. In this way, responses from patrol officers and IOs demonstrate differences between and within their respective samples.

Table 4.4 Perceptions on the Frequency of Information Sharing

		Infrequently/ rarely (%)	Occasionally (%)	Frequently (%)	Very Frequently (%)
Intelligence Officers	To Patrol (n=55)	2 (3.6)	13 (23.6)	19 (34.6)	21 (38.2)
	From Patrol (n=56)	8 (14.3)	31 (55.4)	13 (23.2)	4 (7.1)
Patrol Officers	To IOs (n=553)	285 (51.5)	181 (32.7)	61 (11.0)	26 (4.7)
	From IOs (n=556)	254 (45.7)	198 (35.6)	78 (14.0)	26 (4.7)

From an IO perspective, they tend to share information frequently (34.6%) or very frequently (38.2%) with patrol but only occasionally (55.4%) receive it in return. This finding would suggest that IOs believe that they tend to share information more often than they receive it. In contrast, most patrol officers (51.5%) perceive themselves to only share information with IOs infrequently, and the modal category for receiving information from IOs is also infrequently/rarely (45.7%). That being said, a higher proportion of patrol officers report receiving information from IOs occasionally or

frequently than the same categories for providing it. These results reflect that both IOs and patrol officers perceive that IOs share more information with patrol officers than they receive.

As with communication, it is also useful to examine the impact the IOP may have on information sharing within patrol. Both IOs and IO supervisors responded to questions related to this (see Table 4.5). More specifically, IOs were asked how the IOP had influenced their frequency of sharing information with other officers. Similarly, supervisors were asked what they thought the program's impact was on information sharing at the patrol level.

The majority of both IOs (96.5%) and IO supervisors (88.9%) reported believing that the IOP had increased, if not greatly increased, their information sharing or information sharing within patrol, respectively. The remainder of the individuals in each sample reported that the IOP had led to no change in information sharing. Still, it is also worth noting that no one in either sample believed that the program had a negative impact on information sharing. Overall, perceptions generally indicate that the IOP positively impacted information sharing, even more so than the perceived impacts on communication.

Table 4.5 Perceived Impact of the IOP on Information Sharing

	Decreased (%)	No Change (%)	Increased (%)	Greatly Increased (%)
Intelligence Officers (n=57)	0 (0.0)	2 (3.5)	24 (42.1)	31 (54.4)
Intelligence Officer Supervisors (n=27)	0 (0.0)	3 (11.1)	11 (40.7)	13 (48.2)

Communication with the PIC

While communication and information sharing at the patrol level are a key priority of the IOP, it is also important to understand how patrol officers and IOs engage with the PIC, which serves as the hub spearheading the IOP. Both patrol officers and IOs were asked how often they communicated with the PIC, though these questions varied slightly. When asked how often they had contacted the PIC in the past year, the most common response by patrol officers was not at all (67.6%). This response was followed by infrequently (18.4%), occasionally (10.5%), frequently (2.4%), and very frequently (1.1%). When asked how often they communicate with PIC personnel, IOs most commonly reported that this occurred less than once a month (43.9%). This response was followed by monthly (31.6%), weekly (15.8%), and daily (8.8%).

While variation in the questions means that the responses cannot be directly compared, it would seem that the majority of patrol officers and intelligence officers are not frequently in contact with the PIC or their personnel. However, when asked how often they asked for assistance from the PIC IOs individually, there were clearer differences between the patrol officers and IOs. More specifically, only 8.5% of patrol officers reported requesting assistance from at least one PIC IO frequently or very frequently. In contrast, almost half (47.4%) of the IOs reported this frequency of assistance from PIC IOs. While both patrol officers and IOs report connecting with PIC IOs more than the PIC more generally, it seems that the connection of the IOs to PIC IOs is substantially more prevalent.

Prioritized Information

In addition to understanding the extent to which communication and information sharing occurs within the IOP context, it is also beneficial to understand what types of information are being prioritized for sharing. As earlier mentioned, one key mechanism for assessing this is the IORs, which consist of reports submitted by IOs for further sharing and analysis. Critical to emphasize is that IORs represent the key information-sharing mechanisms between IOs and the PIC. Two key measures that inform what information is prioritized are the categorization (see Table 4.6) and nature of crime (see Table 4.7) of the IORs.

In terms of categorization, the vast majority (70.0%) of IORs were related to specific cases that individual IOs were working on. That most IORs are related to specific cases makes sense considering that the patrol IOs are mostly dedicated to the patrol function in which responses to specific calls are generally the priority. However, it is worth recognizing that other relevant areas such as crime hot spots, repeat offenders, and recurring targets are also considered in IORs.

Table 4.6 Categorization of IORs

	N	%
Specific Case	880	70.0
Crime Hot Spot	169	13.4
Repeat Offender	127	10.1
Recurring Target	82	6.5
Total	1258	100.0

In regard to the nature of crime reported in IORs, four crime types make up almost three-quarters (74.3%) of those reported in the IORs. These key categories consist of property crime (23.7%), person-on-person violence (22.8%), suspicious activity (15.5%), and drug market activity (12.3%). Such findings suggest that these are the areas

that patrol IOs prioritize the most for sharing and for further analysis. Additionally, the results could indicate these are the areas that officers perceive will benefit the most from sharing.

Yet, it is also important to note that the number of other categories and variations within these could be indicative of very broad applicability. For example, IOs also reported a variety of less criminally related issues, such as welfare-related cases, which consisted of missing individuals, people with mental health issues, and cases related to suicide. Another particularly relevant category is warrants, which was created given a large number of IORs relevant to this in the other category. The frequency of these cases would suggest that patrol IOs see great value in sharing information on individuals with existing warrants to help locate them. There were also many other different crime types within the other category, including animal abuse, cybercrime, and rioting.

Table 4.7 Nature of Crime of IORs

	N	%
Property Crime	437	23.7
Person on Person Violence	421	22.8
Suspicious Activity	285	15.5
Drug Market	227	12.3
Public Disorder	99	5.4
Warrants	82	4.4
Other	76	4.1
Terrorist Threats	53	2.9
Criminal Groups	33	1.8
Welfare	33	1.8
Threats	32	1.7
Sex-Related	20	1.1
Suicide	18	1.0
Weapons	15	0.8
Traffic	12	0.7
Total	1843	100.0

Conceptualizations of Success

In addition to understanding what communication and information sharing look like and what information is being shared, it is immensely beneficial to understand how the successful use of this information is conceptualized. Success stories provided in the monthly executive reports demonstrate what the IOP sergeant views as a successful application of the program's training and resources. A good place to start is understanding what types of cases are frequently present in success stories. As demonstrated in Table 4.8, the success stories include a wide variety of different crime types. While the three most common crime types of violent crime (35.2%), property crime (17.4%), and missing person/welfare/suicide (10.9%) make up 63.5% of the success stories, there was a great deal of variation overall.

One indicator of the variation in perceived successes is the sheer number of categories. Perhaps even more striking, however, is the amount of variation within the categories themselves. For example, the violent crime category included assaults, domestic violence, homicide, kidnapping, robberies, and shootings. Similarly, property crimes included cybercrimes, forgery, fraud, home invasions, theft, vehicle theft, and residential and commercial burglaries. Such evidence would suggest that not only are IO tools and training useful in addressing a wide array of crimes, as also shown by the IORs, but that the value of this is recognized by the sergeants who have overseen the IOP. Evidently, perceived successful use of IO resources is not limited to any particular crime type or offense.

Table 4.8 Success Story Case Types

	n	%
Violent Crime	87	34.8
Property	43	17.8
Missing person/welfare/suicide	27	10.9
Barricade	15	6.1
Disorder/threats	15	6.1
Multiple/other	13	5.3
Warrants	12	4.9
Traffic	10	4.0
Sex crimes	9	3.6
Drugs	8	3.2
Firearms	5	2.0
Gangs/cartels	3	1.2
Total	247	100.0

Given the variety of crime types that can be addressed with intelligence resources and training, it is also useful to understand how these were utilized (see Table 4.9). In the vast majority (80.6%) of success stories, IOs were typically focused on suspect workups, identifications, or locations. More specifically, such work usually involved providing more information on known suspects or identifying potential suspects involved in certain criminal activities. The specifics of this varied based on the reported success, but this could involve anything from working on providing detailed workups for ongoing cases to real-time tactical support in volatile situations such as barricades. Broadly, these success stories demonstrate that the ILP can certainly benefit patrol's ability to identify and apprehend suspects.

Most of the remaining success stories are focused on workups, identifications, or locations pertaining to either subjects (9.7%) or victims (6.9%). Work related to subjects typically involved dealing with individuals who may have been lost, missing, having mental or medical emergencies, or suicidal. Resources were typically utilized to either

make contact with the individuals involved or friends/family to resolve their issues. The cases related to victims included identifying dead victims from traffic cases or violent crimes and individuals who had been victimized in cases related to other crimes such as violent, property, or sex offenses.

Information for dead victims was typically utilized to notify next of kin or ongoing investigations. The identification of other victims allowed for property to be returned, additional charges to be made, and in the case of the sex victim, a child to be removed from the suspect's home. The remaining success stories were labeled as being more relevant to patrol (2.0%) as it was unclear how IOP training and resources were utilized. Overall, the intelligence resources and training provided to IOs are demonstrated to be versatile and useful in many ways.

Table 4.9 Success Story Intelligence Uses

	n	%
Suspect workup/ID/location	201	80.6
Subject workup/ID/location	24	9.7
Victim workup/ID/location	17	6.9
Patrol	5	2.0
Total	247	100.0

The final key measure of success addressed in terms of success stories is the dispositions or outcomes that arose from IO involvement (see Table 4.10). Two outcomes, namely, arrests (45.3%) and information dissemination (39.7%), made up most of the dispositions for the success stories. The tangible outcome of arrest was the most common, but it is worth noting that in the vast majority of these cases, the arrest was not made by the patrol IOs. While not typically the arresting officers, the IOs are recognized in these stories because their information was critical for apprehending suspects and

taking them into custody. The second most common outcome was information dissemination, in which IOs provided the information they had gathered and developed to other squads, investigators, or special units. These cases were often ongoing but were likely to lead to an arrest.

The remaining cases related to individuals being located (9.7%) or fell under a catch-all other category (5.3%). The category related to individuals being located was generally related to lost or missing individuals or finding those who were having a medical emergency or threatening suicidal actions. Success stories encompassed individuals being reunited with family or caregivers and potential harm to subjects being prevented. The other outcomes included recovering vehicles, attaining a confidential informant, completing a tips and leads report, and identifying false reports or calls. Overall, the success story dispositions demonstrate that successes of most interest tend to be those with tangible outcomes or those that have the potential to lead to these.

Table 4.10 – Success Story Dispositions

	n	%
Arrest	112	45.3
Information dissemination	98	39.7
Located child/family/home/subject	24	9.7
Other	13	5.3
Total	247	100.0

Summary

Overall, this chapter demonstrates that communication and information sharing are occurring under the IOP, but more frequently between patrol and PIC IOs, and less so with the PIC. There is some disparity regarding perceptions of the frequency with which communication and information sharing are occurring, yet it would appear IOs provide

more information than they receive. When it comes to information shared by the IOs with the PIC and other IOs, this typically pertains to specific cases but addresses a broad spectrum of crime issues. This is also reflected by how success is conceptualized by IOP sergeants, with success stories being reported that address an array of different issues. That being said, most success stories focus on the identification or location of suspects and typically either result in tangible outcomes such as arrest or information disseminated to units to accomplish such results. With this understanding of how IOs are operating and some of the successes they are having, the next chapter will explore the extent to which the program is viewed to be beneficial to the patrol function.

CHAPTER 5

PERCEIVED VALUE OF THE IOP TO PATROL

Results

Overall Views on IOP Value

As outlined previously, there are two areas of interest regarding the perceptions of the IOP's impact. These consist of thoughts on its value to patrol activities and the patrol function as a whole. This section starts by comparing patrol officers', IOs,' and IO supervisors' views by using the scaled patrol activities value and patrol function value variables (see Table 5.1). By examining the mean scores for each of the variables of interest, it is evident that IOs are the most supportive of the idea that the IOP improves patrol activities and that the program is of great value to the patrol function. They are followed by IO supervisors and then by patrol officers.

Relative to a max value of 4 for the level of improvement the IOP had on patrol activities, the means were 3.74 for IOs, 3.30 for IO supervisors, and 3.06 for patrol. In regard to the overall patrol function value, the means were 3.83 for IOs, 3.63 for IO supervisors, and 3.25 for patrol. It is important to note that the means of all of these values broadly suggest perspectives demonstrating support for the ideas that the IOP enhances patrol activities and benefits patrol as a whole. For patrol activity value, the means between 3 and 4 are indicative of being between improved and greatly improved on the scale for the original questions. Similarly, the value between 3 and 4 on the patrol function value scale indicates a response between agree and strongly agree on the scale, suggesting that the IOP was beneficial to patrol.

Table 5.1 Average Perceptions Score of Patrol Activities and Patrol Function Values

	Patrol Officers (SD) (n=541/556)	IOs (SD) (n=56/57)	Supervisors (SD) (n=26/27)
Patrol Activities Value	3.06 (0.68)	3.74 (0.34)	3.30 (0.63)
Program Function Value	3.25 (0.55)	3.83 (0.28)	3.63 (0.45)

Considering the relative consistency of the supportive views across the three groups, it is worthwhile determining whether substantive differences in the means are statistically significant. This analysis was explored utilizing Kruskal-Wallis and Dunn tests to determine if differences existed and how specific samples were different from each other. In regard to the patrol activities value, the Kruskal-Wallis test indicated that significant differences were present with a probability value of 0.0001. In terms of which samples were different, the Dunn test indicated that the patrol officers' sample was lower and different from IOs ($p<0.001$) and that IOs' sample was higher and different from IO supervisors ($p<0.01$). The only groups that were not different to a statistically significant level were patrol officers and IO supervisors ($p=0.051$). Overall, this suggests that IOs had the most supportive views of the IOP's impact on improving patrol activities.

For the patrol function value variable, the Kruskal-Wallis test indicated that significant differences were present with a probability value of 0.0001. In terms of which samples were different, the Dunn test indicated that all samples were statistically different. This finding would suggest that IOs agreed the strongest that the IOP added value to that patrol function, followed by IO supervisors and then patrol officers. Broadly speaking, these results for the two patrol activities value and patrol function value

variables illustrate that while all three samples saw value in the IOP, IOs were the most supportive.

Factors Influencing Patrol Perceptions

While most of the respondents in the three samples appear to be largely supportive of the program, it is also useful to explore factors that could help explain potential variation in these perceptions. As previously mentioned, the perceptions of patrol officers are of particular interest due to both the program's emphasis on patrol and the size of the sample that allows for greater levels of statistical analysis. This focus is even more relevant given the greater variability in the patrol officer sample. As outlined in the methodology above, this section focuses on three potentially relevant sets of variables that may influence patrol officers' opinions of the IOP. These consist of work characteristics, awareness of the IOP program, and engagement with the IOP. The impacts of each of these are examined individually and then as a complete model for patrol activities value (see Table 5.2) and patrol function value (see Table 5.3). The overall impacts of variables within both models are then summarized in Table 5.4.

Patrol Activities Value

Work characteristics

For patrol activities value, work characteristics were typically not demonstrated to be significant or relevant. In the work characteristics model, the only significant findings were that the officers in the 400 precinct tended to have less supportive views than the 200 precinct that was excluded for comparison (β=-0.321) and that the swing shift officers were more supportive than day shift officers (β=0.211). While these findings highlight potential variation between precincts and shifts, these areas require further

investigation. It is also worth noting that the work characteristics model only had an r-squared value of 0.045, suggesting it is very limited in explaining variation in perspectives regarding the IOP's value to patrol activities.

IOP Awareness

Variables related to awareness of the IOP contained more significant variables for predicting patrol officers supporting the idea that the IOP was beneficial to patrol activities. In the IOP awareness model, patrol officers who understood the role of IOs have more supportive views (β=0.480). Supportive perspectives also increased with each unit increase in patrol officers' familiarity with the PIC (β=0.163). The only variable not significant in the individual model was patrol officer familiarity with the IOP more broadly. In addition, the IOP awareness model did have a larger r-squared value than the work characteristics model, with a value of 0.133.

IOP Engagement

Several factors related to patrol officer engagement were also found to significantly influence their perspectives regarding the IOP's value to patrol activities. In the IOP engagement model, the results indicated that favorable perceptions on the impact on patrol activities increased with the frequency of patrol officers sharing information with IOs (β=0.224), how often they called IOs to assist them at a scene (β=0.078), as well as if they frequently requested assistance from one or more of their patrol IOs on a frequent or very frequent basis (0.245). Worth noting is that neither the general amount of communication patrol officers had with IOs nor frequently requesting assistance from PIC IOs had any significant impact on perceptions. It is also worth noting that the IOP engagement model had the highest r-squared value of the individual models with a value

of 0.192. This finding would suggest that these factors are better at accounting for differences in the examined perspectives than either work characteristics or IOP awareness.

Complete Model

The complete model examines the impacts of all the previously mentioned factors after the work characteristics, IOP awareness, and IOP engagement models have been combined. Only one impact remained significant regarding work characteristics: the disparity between the 200 and 400 precincts (β=-0.355). Interestingly, this had the largest magnitude in the complete model. Generally, however, work characteristics are demonstrated to have few impacts on patrol officer perspectives.

In relation to the IOP awareness model, the complete model had some noticeable differences. Most apparent was that understanding the IO role (β=0.333), PIC familiarity (β=0.105), and IOP familiarity (β=0.-0.117) were all significant, even though the latter mentioned variable was not significant in the original model. Furthermore, this last finding was anomalous as IOP familiarity was predicted to have a negative impact, as opposed to the non-significant positive one in the original model. It is important to note that all variables were checked for possible relevant issues such as multicollinearity, but none were found. It is unclear what may account for this counter-intuitive finding that seems in contrast to the other variables in this section.

In contrast to the original IOP engagement model, calls for assistance were no longer a significant predictor in the complete model. Only the information sharing (β=0.209) and frequent patrol assist (β=0.247) variables were significant, but both maintained their positive impacts on patrol perceptions. Both the IO communication and

frequent PIC assist variables remained statistically insignificant. Once all the variables were incorporated into the complete model, it had an r-squared value of 0.281. While this indicates a drastic improvement over the individual models, it also indicates that there are likely other relevant factors impacting perceptions not included in them.

Table 5.2 Models Predicting Perceptions on Patrol Activities Value

	Work Characteristics	IOP Awareness	IOP Engagement	Complete Model
Precinct				
400	**-0.321****			**-0.355****
	(-0.12)			**(0.12)**
500	-0.236			0.068
	(0.24)			(0.22)
600	-0.212			-0.151
	(0.12)			(0.12)
700	-0.111			-0.131
	(0.12)			(0.11)
800	-0.194			-0.194
	(0.12)			(0.12)
900	-0.014			0.098
	(-0.13)			(0.12)
Shift				
Swing Shift	**0.211****			0.100
	(0.07)			(0.07)
Grave Shift	0.126			0.065
	(0.08)			(0.07)
Understand IO Role		**0.480*****		**0.333*****
		(0.07)		**(0.08)**
IOP Familiarity		0.007		**-0.117***
		(0.05)		**(0.06)**
PIC Familiarity		**0.163*****		**0.105***
		(0.05)		**(0.05)**
IO Communication			-0.039	-0.033
			(0.03)	(0.03)
Information Sharing			**0.224*****	**0.209*****
			(0.05)	**(0.05)**
Calls for Assistance			**0.078****	0.051
			(0.03)	(0.03)
Frequent Patrol Assist			**0.245*****	**0.247*****
			(0.06)	(0.06)

Frequent PIC Assist			0.065	-0.017
			(0.10)	(0.10)
_cons	**3.095*** **	**1.948*** **	**2.418*** **	**2.065*** **
	(0.11)	**(14.70)**	**(0.08)**	**(0.16)**
N	520	526	492	482
R^2	0.045	0.133	0.192	0.281
Standard errors in parentheses				
** p<0.05, ** p<0.01, *** p<0.001*				

Patrol Function Value

Work characteristics

For perceived patrol function value, there was no significant variation in perspectives across precincts. Thus, the only significant work characteristic was differences in shifts. More specifically, it was found that both swing shift (β=0.256) and grave shift (β=0.268) patrol officers had more positive perspectives regarding the IOP than day shift officers. While officer shift could be an important variable for explaining differences in perceptions regarding the IOP, it is important to highlight that the work characteristics model only had an r-squared value of 0.052. This finding suggests they are rather limited in explaining variation in perspectives regarding the value of the IOP.

IOP Awareness

The model related to awareness of the IOP contained more significant variables for predicting more support by patrol officers for the idea that the IOP is beneficial. In the IOP awareness model, patrol officers who understood the role of IOs had more supportive views (β=0.478). Supportive perspectives also increased with each unit increase in patrol officers' familiarity with the IOP (β=0.078). The only variable not significant in the model was patrol officer familiarity with the PIC. Worth noting is that

the IOP awareness model did have a larger r-squared value than the work characteristics model, with a value of 0.187.

IOP Engagement

Three of the five factors related to patrol officer engagement were found to significantly influence patrol officer perspectives regarding the value of the IOP. Favorable perceptions of the IOP increased with the frequency of patrol officers sharing information with IOs (β=0.106), how often they called IOs to assist them at a scene (β=0.115), as well as if they frequently requested assistance from one or more of their patrol IOs on a frequent or very frequent basis (β=0.205). Worth noting is that neither the general amount of communication patrol officers had with IOs nor frequently requesting assistance from PIC IOs had any significant impact on perceptions. It is also worth noting that the IOP engagement model had the highest r-squared value of the individual models with a value of 0.254. This finding would suggest that these factors are better at accounting for differences in the examined perspectives than either work characteristics or IOP awareness.

Complete Model

The complete model examines the impacts of all the previously mentioned factors after the work characteristics, IOP awareness, and IOP engagement models have been combined. Regarding work characteristics, the shift differences detected in the original model remained significant but were noticeably smaller in magnitude for both swing shift (β=0.160) and grave shift relative (β=0.192) to day shift. Still, these results would suggest that officer shift type is certainly worth exploring. The same cannot be said for

differences between precincts. The final model results mirrored those in the original, with no significant variation in perspectives related to differences in officer precinct.

In relation to the IOP awareness model, only one of the two significant predictors remained significant in the complete model. More specifically, understanding the role of IOs increased patrol perceptions of the IOP (β=0.343). It is worth noting that this was the predictor with the highest magnitude in the complete model. That being said, neither familiarity with the IOP nor with PIC had any significant impact on patrol officer perceptions.

In contrast to the original IOP engagement model, information sharing was no longer a significant predictor in the complete model. Only the calls for assistance (β=0.090) and frequent patrol assist (β=0.191) variables were found to be significant, but both maintained their positive impacts on patrol perceptions. Both the IO communication and frequent PIC assist variables remained statistically insignificant. Once all the variables were incorporated into the complete model, it had an r-squared value of 0.332. While this indicates a drastic improvement over the individual models, it also indicates that there are other relevant factors impacting perceptions that need to be identified and considered.

Table 5.3 Models Predicting Perceptions on Patrol Function Value

	Work Characteristics	IOP Awareness	IOP Engagement	Complete Model
Precinct				
400	0.072			-0.034
	(0.09)			(0.09)
500	0.015			0.264
	(0.19)			(0.17)
600	0.042			0.003
	(0.10)			(0.09)

700	0.098			0.005
	(0.09)			(0.09)
800	0.125			0.064
	(0.10)			(0.09)
900	0.052			0.069
	(0.10)			(0.09)
Shift				
Swing Shift	**0.256*****			**0.160****
	(0.06)			**(0.05)**
Grave Shift	**0.268*****			**0.192*****
	(0.06)			**(0.06)**
Understand IO Role		**0.478*****		**0.343*****
		(0.06)		**(0.06)**
IOP Familiar		**0.078***		-0.062
		(0.04)		(0.04)
PIC Familiar		0.062		0.029
		(0.04)		(0.04)
IO Communication			0.018	0.026
			(0.03)	(0.03)
Information Sharing			**0.106****	0.070
			(0.04)	(0.04)
Calls for Assistance			**0.115*****	**0.090*****
			(0.02)	**(0.03)**
Frequent Patrol Assist			**0.205*****	**0.191*****
			(0.05)	**(0.05)**
Frequent PIC Assist			0.063	0.009
			(0.08)	(0.08)
_cons	**2.991*****	**2.151*****	**2.648*****	**2.091*****
	(0.08)	**(0.10)**	**(0.06)**	**(0.12)**
N	533	539	499	489
R^2	0.052	0.187	0.254	0.332

Standard errors in parentheses

** p<0.05, ** p<0.01, *** p<0.001*

Table 5.4 Summary for Factors Impacting Perceptions

	Patrol Activities Value	Patrol Function Value
Work Characteristics		
Precinct		
200	#	#
400	↓	●
500	●	●
600	●	●
700	●	●
800	●	●
900	●	●
Shift		
Day Shift	#	#
Swing Shift	●	↑
Grave Shift	●	↑
IOP Awareness		
Understand IO Role	↑	↑
IOP Familiar	↓	●
PIC Familiar	↑	●
IOP Engagement		
IO Communication	●	●
Information Sharing	↑	●
Calls for Assistance	●	↑
Frequent Patrol Assist	↑	↑
Frequent PIC Assist	●	●

↑=significant increase $p<0.05$; ↓=significant decrease $p<0.05$; ●=no statistically significant effect #=Reference group

Patrol Officer Comments

In addition to understanding what factors impacted patrol officer perceptions, it is also useful to ascertain what specific thoughts they may have had about the program. As outlined in the methodology section, the focus is restricted to comments from those who scored below a three on either the patrol activities value or patrol function value variables. This section's key objective is to examine these patrol officer comments (n=46) for any expressed concerns or recommendations for improvement.

In terms of concerns, there were very few inherently negative comments. The only negative comments included two concerns regarding how IOs were selected and two which said the program was a waste of time. In one of these latter comments, the respondent suggested their main concern was a lack of IOs. This idea reflects the most common theme for comments or recommendations for the program. The majority of examined patrol officers (n=29) called for either more IOs, more training opportunities, or expressed a desire to become an IO or learn more about them.

In addition, three comments mentioned a lack of access to IOs. Further, another three comments suggested that the availability of IO resources should be expanded to more of patrol so that they could more effectively do their jobs. Relatedly, a few officers mentioned not knowing much about the program. Some recommendations for addressing these issues included issuing IOs city phones to make them easier to contact, having lists of contact numbers for patrol IOs, and having a class on IOs in the POST academy to increase officer familiarity.

Overall, the patrol officers' comments were very supportive of the IOP despite the sample examined having lower overall perceived value scores. Almost all comments related to how the program could be expanded or improved. Such evidence would suggest that patrol officers seem very receptive to the IOP as well as what it has to offer them and the patrol function more generally.

Summary

Overall, patrol officers, IOs, and IO supervisors seem to be largely receptive to and supportive of the IOP. While there was some variation in opinions, most notably in patrol, the most impactful factors that influence this group tended to be related to IOP

awareness and engagement. Increases in these areas tended to enhance patrol officer support for the program. In particular, understanding the role of IOs and frequently asking for assistance from patrol IOs increased perceptions of both patrol activities and patrol function values. As further demonstrated by the comments of relatively less supportive patrol officers, there is great support for expanding the IOP. With this in mind, the next chapter explores whether these positive perceptions are reflected in changes to officer productivity and proactivity.

CHAPTER 6

IMPACT OF THE IOP ON PRODUCTIVITY AND PROACTIVITY

Results

IOP Impacts on Productivity and Proactivity

As previously outlined, one key aim of this study is to assess whether receiving intelligence officer training impacted officers' tangible products and behaviors. This objective is examined by utilizing paired t-tests and Cohen's D post-tests to compare officer productivity (arrests, field interviews, and incident reports) and proactivity (self-initiated calls) a year before and year after their training for all patrol officers who received this (see Table 6.1). These tests are then followed by the results from a Wilcoxon signed-rank test to determine individual-level impacts in terms of whether IOs productivity and proactivity increased, decreased, or remained the same.

Arrests

The paired t-test for arrests indicated that the mean number of these decreased from 31.8 in the pre-training period to 28.3 in the post-training period. This difference was found to be statistically significant ($p<0.01$). The Cohen's D post-test produced a point estimate of .022, which is indicative of a small effect size. Taken together, this would suggest that attending IOP training was associated with a small but significant decrease in the number of arrests that officers made. From the Wilcoxon sign-rank test, it appears that the decreases were fairly common, with 59.3% of the sample experiencing these declines. That being said, 35.2% of officers did have increases in their number of arrests, and 5.6% had no change.

Together, these findings at face value do not appear to support the perceptions of any of the three groups that were surveyed. When asked to assess what the impact of the IOP program is on "the ability to make breakthroughs (e.g., identifying suspects) in cases leading to an arrest," 79.4% of patrol officers, 100.0% of IOs, and 65.4% of IO supervisors reported the IOP improved or greatly improved this. This finding certainly merits greater attention. It is addressed further in the discussion chapter.

Field Interviews

The paired t-test for field interviews indicated that the mean number of these decreased from 59.8 in the pre-training period to 45.6 in the post-training period. This difference was found to be statistically significant ($p<0.001$). The Cohen's D post-test with an estimate of 0.40 is roughly indicative of a medium effect size. Taken together, this would suggest that attending IOP training resulted in a moderate and significant decrease in the number of field interviews conducted by officers. From the Wilcoxon sign-rank test, it appears that the decreases were fairly common, with a little over two-thirds (66.7%) of the officers in the sample experiencing these declines. Despite this, almost a third (32.1%) of officers did have increases in their number of field interviews, and 1.2% had no change.

Incident Reports

The paired t-test for incident reports indicated that the mean number of these decreased from 108.6 in the pre-training period to 89.4 in the post-training period. This difference was found to be statistically significant ($p<0.001$). The Cohen's D post-test estimate of 0.43 is indicative of a medium effect size. Taken together, this would suggest that attending IOP training resulted in a medium and significant decrease in the number

of incident reports submitted by officers. From the Wilcoxon sign-rank test, it appears that the decreases were common, with a little under two-thirds (65.4%) of the officers in the sample experiencing these declines. It is also worth noting that just over a third (33.3%) of officers did have increases in their number of incidents, and 1.2% had no change.

Self-initiated calls

The paired t-test for self-initiated calls indicated that the mean number decreased from 118.7 in the pre-training period to 96.5 in the post-training period. This difference was found to be statistically significant ($p<0.001$). The Cohen's D post-test estimate of 0.35 indicates a small to medium effect size, but one that is closer to the latter. Taken together, this would suggest that attending IOP training resulted in a medium but significant decrease in the number of self-initiated calls performed by officers. From the Wilcoxon sign-rank test, it appears that the decreases were common, with 64.8% of the officers in the sample experiencing these declines. Just over a third (34.6%) of officers did have increases in their number of self-initiated, and 0.6% had no change in these.

Such findings serve as a direct contrast to those of Telep and Ready (2016), which found IOs had increased proactivity. Further, similar to arrests, the findings seem contrary to the three surveyed populations' perspectives regarding the expected impacts of the program. When asked to assess what the impact of the IOP program is on "the ability to make efficient use of unassigned time (not responding to calls)," 59.5% of patrol officers, 91.1% of IOs, and 73.1% of IO supervisors reported the IOP improved or greatly improved this. As with arrests, this finding warrants further attention and will receive additional attention in the discussion chapter.

Table 6.1 Productivity and Proactivity Paired T-Test Results (n=162)

	Pre-Training Mean (SD)	Post-Training Mean (SD)	Mean Difference (SD)	p value	Cohen's D
Arrests	31.8 (23.57)	28.3 (20.42)	-3.5 (15.97)	0.006	0.22
Field Interviews	59.8 (47.34)	45.6 (39.87)	-14.2 (35.09)	<0.001	0.43
Incident Reports	108.6 (59.89)	89.4 (51.90)	-19.2 (45.00)	<0.001	0.40
Self-initiated Calls	118.72 (83.03)	96.46 (73.27)	-22.25 (63.67)	<0.001	0.35

Table 6.2 Signed Rank Test Demonstrating Individual Changes in Productivity and Proactivity (n=162)

	Decreased (%)	No Change (%)	Increased (%)	Wilcoxon Sign-rank p value
Productivity				
Arrests	96 (59.3)	9 (5.6)	57 (35.2)	0.002
Field Interviews	108 (66.7)	2 (1.2)	52 (32.1)	<0.001
Incident Reports	106 (65.4)	2 (1.2)	54 (33.3)	<0.001
Proactivity				
Self-initiated calls	105 (64.8)	1 (0.6)	56 (34.6)	<0.001

Additional Factors Influencing Productivity and Proactivity

In addition to assessing the impacts of the IOP on productivity and proactivity, this section also utilizes linear regression to assess whether other potentially relevant factors may have influenced the different measures and behaviors related to these (see Tables 6.3 and 6.4).

Arrests

For arrests, three factors were significant: if the officers were current IOs, the number of arrests they had made in the previous year, and how many calls they had been dispatched to. Perhaps the most unanticipated finding was regarding the current IO status. More specifically, those who were current IOs were estimated on average to have 5.5 fewer arrests than patrol officers who had received training from the IOP but were no longer active. Worth noting is that arrests were the only variable that was significantly impacted by officers being current IOs. This finding could suggest that declines in arrest for those receiving training may be more related to their role as an intelligence officer as opposed to IO training itself. Also, worth reiterating, as mentioned in the previous section, is that the findings related to arrest do not match the perspectives of the majority of patrol officers, IOs, and IO supervisors who believe that the IOP increases the ability to make arrests.

The two other significant variables predicted positive changes. For each call that patrol officers were dispatched to, they had a predicted additional 0.01 arrests. This prediction makes sense as increases in dispatched calls would increase opportunities to make arrests. In addition, for each arrest that officers had made in the previous year, they were predicted to have an additional 0.63 arrests. This finding and its larger size relative to the impact of dispatched calls demonstrates the importance of past behavior in predicting future behavior. Neither the precinct nor training year variables provided any significant differences in arrests relative to their reference groups.

Field Interviews

For field interviews, two predictors were significant in predicting variation in the post-training year. These variables included the number of calls officers were dispatched to in the post-training year and the number of field interviews conducted in the pre-training year. For each call that patrol officers were dispatched to, they had a predicted additional 0.03 field interviews. As with arrests, such a change makes sense as increases in dispatched calls would increase opportunities to conduct more field interviews. In addition, for each field interview that officers had made in the previous year, they were predicted to have an additional 0.51 field interviews. As with arrests, this result and its larger size relative to the impact of dispatched calls demonstrates the importance of past behavior in predicting future behavior. The remaining variables consisting of current IO, precinct, and training year all had some variation, but none were statistically significant.

Incident Reports

For incident reports, two predictors were significant in predicting variation in the post-training year. These variables included the number of calls officers were dispatched to in the post-training year and the number of incident reports produced in the pre-training year. For each call that patrol officers were dispatched to, they had a predicted additional 0.08 incident reports. As with the previous productivity-related outputs, this prediction makes sense as increases in dispatched calls would increase opportunities to produce more incident reports. In addition, for each incident report that officers produced in the previous year, they were predicted to have an additional 0.40 incident reports. As with the previous productivity measures, this result and its larger size relative to the impact of dispatched calls demonstrates the importance of past behavior in predicting

future behavior. The remaining variables consisting of current IO, precinct, and training year all had some variation, but none were statistically significant.

Self-initiated Calls

For the lone proactivity measure, self-initiated calls, two predictors were significant in predicting variation in the post-training year. These variables included the number of calls officers were dispatched to in the post-training year and the number of self-initiated calls they had performed in the pre-training year. For each call that patrol officers were dispatched to, they had a predicted additional 0.04 self-initiated calls. While these results are similar to the productivity measures, such a finding is somewhat counterintuitive. One might expect that having an increased number of dispatched calls would reduce the opportunity for officers to engage in self-initiated calls. Possibilities for explaining this finding are addressed in the discussion chapter.

In addition, for each self-initiated call that officers participated in the previous year, they were predicted to have an additional 0.57 self-initiated calls. As with the productivity measures, this result and its larger size relative to the impact of dispatched calls demonstrates the importance of past behavior in predicting future behavior. The remaining variables consisting of current IO, precinct, and training year all had some variation, but none were statistically significant.

Table 6.3 Factors Impacting Officer Productivity and Proactivity

	Arrests	Field Interviews	Incident Reports	Self-initiated Calls
Current IO	**-5.475***	0.00694	-8.567	3.008
	(2.44)	(4.99)	(5.81)	(9.59)
Dispatched Post-Training	**0.0105***	**0.0290*****	**0.0849*****	**0.0425****
	(0.003)	**(0.008)**	**(0.01)**	**(0.02)**
Arrests Pre-Training	**0.627*****			
	(0.05)			
Field Interviews Pre-Training		**0.510*****		
		(0.05)		
Incident Reports Pre-Training			**0.404*****	
			(0.05)	
Self-Initiated Calls Pre-Training				**0.574*****
				(0.05)
Precinct				
400	5.079	4.209	4.232	32.31
	(5.56)	(11.37)	(13.25)	(21.59)
500	3.299	24.51	3.754	10.00
	(6.13)	(12.48)	(14.71)	(23.69)
600	-0.618	-1.446	5.879	-15.26
	(5.25)	(10.67)	(12.56)	(20.54)
700	4.403	4.839	8.356	3.985
	(5.04)	(10.16)	(11.94)	(19.38)
800	4.982	-11.59	1.069	-16.71
	(5.24)	(10.70)	(12.51)	(20.30)
900	9.913	-0.206	11.88	20.78
	(5.20)	(10.53)	(12.35)	(20.17)
Training Year				
2016	1.125	-11.31	-4.876	-2.566
	(4.05)	(8.25)	(9.72)	(15.72)
2017	4.772	3.577	-5.016	18.89
	(5.35)	(10.95)	(12.71)	(20.66)
2018	5.017	-5.591	0.866	18.45
	(4.75)	(9.69)	(11.33)	(18.36)
_cons	-1.306	6.426	6.770	-1.073
	(5.57)	(11.60)	(13.37)	(22.23)
N	161	161	161	161
R^2	0.607	0.574	0.649	0.541

Standard errors in parentheses
** p<0.05, ** p<0.01, *** p<0.001*

Table 6.4 Summary of Factors Impacting Officer Productivity and Proactivity

	Arrests	Field Interviews	Incident Reports	Self-initiated Calls
Current IO	↓	●	●	●
Dispatched Post-Training	↑	↑	↑	↑
Arrests Pre-Training	↑	N/A	N/A	N/A
Field Interviews Pre-Training	N/A	↑	N/A	N/A
Incident Reports Pre-Training	N/A	N/A	↑	N/A
Self-initiated Calls Pre-Training	N/A	N/A	N/A	↑
Precinct	●	●	●	●
Training Year	●	●	●	●

↑=significant increase $p<0.05$; ↓=significant decrease $p<0.05$; ●=no statistically significant effect #=Reference group

Summary

Generally, this chapter found that receiving IOP training and resources decreased official patrol metrics representing productivity and proactivity. While some other factors helped explain some variation in the metrics, such as dispatched calls and past behavior, the cause for the decreases are unclear. Potential explanations for these findings and the findings from the previous two chapters are discussed in greater depth in the next chapter.

CHAPTER 7

DISCUSSION

This chapter summarizes the key findings for each of the results chapters and addresses potential explanations for these results. Further, I explore policy implications of the findings more broadly and for the IOP. Limitations and directions for future research are also addressed.

Summary of Key Findings

Communication and Information Sharing in the IOP

This section summarizes the key findings from the first research question. Specifically, it addresses the functioning of communication and information sharing within the IOP, which information has been prioritized for sharing and analysis, and how successful information has been conceptualized. Such issues provide clear insight into how a patrol-driven ILP program may be implemented and highlight areas for potential improvement.

Communication and Information Sharing

In regard to the communication occurring within the context of the IOP, there is conflicting information. Survey results suggest that patrol officers express notable variation in the frequency of seeing IOs on shift and communicating with them. Generally, patrol officers report relatively infrequent communication, indicating that they communicate with IOs less than once a month. That being said, 44.5% of patrol officers report interacting at least frequently with one or more patrol IO. This is despite the fact that only 25.1% of patrol officers say they communicate with IOs at least a few times a week. Such differences raise questions about patrol officer awareness of which officers

are IOs and the need to promote these individuals in the program. Alternatively, such discrepancies could indicate that while a good portion of patrol officers connect with patrol IOs, they may not view this as being in an IO capacity. More generally, the findings suggest that IOP may be roughly in the early majority stage of Rogers' (2003) diffusion of innovation model.

Clearly, more research is needed to understand how patrol perceives the frequency and the quality of their interaction with IOs. In regard to the frequency of communication at the patrol level, both IO and IO supervisors view the impact of the IOP as beneficial, with the vast majority of these samples believing the program has increased communication. Even with these positive perceptions, there is still room for improvement. Specifically, more could be done to ensure IOs are recognizable and that program leadership is focused on facilitating and advocating for increased communication.

As with communication, information sharing between patrol officers and IOs indicates that patrol and IO perceptions do not always align. For example, IOs perceive receiving information more frequently than patrol perceives providing it. The opposite is also true with IOs perceiving that they share information more frequently than patrol officers believe they are receiving it. One possible explanation for these differences of opinion could be that IOs share information on a relatively frequent basis, but this does not occur evenly across patrol and is likely concentrated within a smaller proportion of officers.

Also critical to highlight is that both IOs and patrol officers report that IOs share more information with patrol officers than they receive. This is a positive finding given

the IOP's focus on information sharing. Also promising was the finding that the majority of both IOs and IO supervisors believe that the IOP increased or greatly increased information sharing at the patrol level. While information sharing is developing, the overall findings suggest a need to further encourage patrol officers to share information, particularly as the majority only report sharing information occasionally.

While IOs have the resources and ability to identify, process, and redirect information, this is less impactful without patrol contributions. More specifically, a lack of information from patrol restricts information flow and greatly inhibits the overarching goal of creating a web of intelligence for the department. Further, it creates missed opportunities for more efficiently addressing issues as IOs can only help address problems or crimes they are aware of.

One other area of communication that should be addressed is that which patrol officers and IOs have with the PIC. Generally, both of these groups' responses indicate that they seldom contacted the PIC or PIC personnel. However, the IOs did seem to contact them more frequently than patrol officers. This finding was particularly apparent regarding contact with PIC IOs; almost half (47.4%) of patrol IOs requested assistance from them frequently, compared to only 8.5% of patrol officers.

Such findings are not surprising given the exposure of IOs to both the PIC and PIC IOs from their training. Yet, the much larger proportion of patrol officers interacting with patrol IOs emphasizes how the program's value is patrol-based as opposed to PIC-based. This idea aligns with the IOP approach as a patrol-driven ILP program and reiterates how the program would likely fail to operate if it were purely driven by the PIC without integrating patrol IOs. Such findings would suggest that the IOP may be

considered to rate highly on the issue of compatibility that Rogers (2003) stresses as necessary for successful innovation implementation. That being said, the findings also raise questions about the awareness of the PIC and the potential resources and assistance it may provide. While patrol IOs should be their first contact, results suggest it could be beneficial to educate patrol more on what the PIC has to offer.

Overall, the results demonstrate that both communication and information sharing is occurring between patrol officers and IOs, as well as with the PIC. Still, there is room for improvement in all of these areas. In particular, more steps must be taken to encourage more patrol engagement with the program and ensure that they know all of the resources available to them.

Prioritized Information

Besides appreciating how communication and information sharing occurs, it is useful to understand what information is prioritized for sharing. While this information is not available for patrol, and future research should examine this, the IORs provide great insight into what IOs prioritize for sharing both with the PIC for further processing and input from other IOs. Results demonstrate that most of the information shared directly relates to specific cases instead of crime hot spots, repeat offenders, or other specific recurring targets. Such a finding is expected given the priorities of patrol focusing on responding to particular crimes. With that in mind, to truly become intelligence-led, the department will want to consider how to apply IOP resources to these other areas and how this can be done more proactively. Such an approach would also be beneficial for more directly assessing the impacts the IOP has in addressing crime.

In regard to what shared information specifically pertains to, there is a myriad of different crimes. While most IORs are related to property crime, person-on-person violence, suspicious activities, or drug market activity, it is critical to recognize IOs see the utility in sharing information on many other types of cases. Ten other broad categories also received attention, as did the additional other category made up of various diverse crimes such as animal abuse, cybercrime, and rioting. Such findings demonstrate that IOs perceive that the PIC and their fellow IOs have the capacity to address a wide array of crimes. They also suggest that the approach is highly compatible with the patrol function given the wide variety of requests that they receive. Such findings are certainly reflective of the all crime, hazards, and harms business approach advocated for ILP by Ratcliffe (2016).

Conceptualizations of Success

The broad applicability of the IOP to help address a wide variety of different crime types is also demonstrated by the success stories that sergeants of the IOP have reported. Most commonly, success stories were related to violent crimes, property crimes, and missing person/welfare/suicide. Still, they also included a number of other case types related to traffic, sex crimes, and concerns with specific groups such as gangs and cartels. While the success stories are distributed differently in terms of the case types, they reiterate the wide utility of the IOP.

In addition to acknowledging the substantial diversity of the cases that can be addressed, it is critical to know how IOs are addressing these. The results suggest that the IOP sergeants view that by far the most impactful way that IOP resources have been utilized are for completing suspect workups, identifications, or locating them. Such

intelligence uses are consistently the most reported actions in the IOP success stories in the monthly executive reports. This application of resources is certainly reflective of the IOP's aforementioned focus on specific cases. While performing similar tasks for other subjects or victims has also been reported, locating suspects certainly appears to be the priority. Recognition of this is important as it indicates how supervisors may want to focus resources when implementing a patrol-driven ILP program. Yet, it is also important to recognize the current gap in addressing more chronic and place-based issues that require longer-term strategic problem-solving. This is certainly an area that merits further exploration by IOP to see how they could provide benefits in such areas as well.

In addition to processes of interest related to intelligence, outcomes are also of great importance. The success stories from the executive reports demonstrated that the IOP sergeants were predominantly interested in the tangible outcome of arrest (45.3%) or cases in which information was disseminated to other units for further processing and investigation (39.7%). This evidence reflects earlier findings that providing workups, identifications, or locations on suspects were the key intelligence activities highlighted in success stories. That being said, there were other outcomes of interest, including ones related to locating vulnerable individuals. More generally, the success stories' outcomes demonstrate that successful use of information in the IOP is conceptualized as that which either generates practical and tangible outcomes or the potential for such results. Clearly, the IOP has the capacity to facilitate these patrol priorities.

Perceived Value of the IOP to the Patrol Function

This section summarizes the key findings from the second research question. Specifically, it addresses patrol officers, IOs, and IO supervisors' perceptions regarding

the value of the IOP to patrol activities and the patrol function more broadly. It also addresses what additional factors may help predict variation in perceptions of patrol officers and what can be gained from specific comments of patrol officers with relatively lower mean perception scores.

Overall Views on IOP Value

Generally, the three samples of interest's perspectives were positive, reflecting what Rogers (2003) may suggest as both a high perceived relative advantage of the IOP as well as compatibility with the objectives of the patrol function. On average, the samples all believed that the IOP improved the effectiveness of patrol activities and agreed more generally that the program benefitted the patrol function. Such findings reflect that the samples believe the IOP to have pragmatic legitimacy. Further, the positive and supportive nature of the findings are important as they demonstrate a widespread receptivity to the IOP. This finding illustrates that patrol-driven ILP approaches can be implemented in ways in which they are widely supported.

Also worth noting is that the IOs directly involved in the program had the highest mean perception scores in regard to the IOP benefitting both patrol activities and the patrol function. While stronger opinions from those involved in the program are not unexpected, that these were so supportive is encouraging. This is especially true given challenges with law enforcement receptivity to innovations and how such challenges can threaten to derail such approaches (Skogan, 2008). That the IOP was so well received across samples and the IOs, in particular, has positive implications of similar approaches being adopted by other departments.

Factors Influencing Patrol Perceptions

For departments considering implementing a patrol-driven ILP program to improve their patrol function, they must be aware of factors that may impact perceptions and receptivity. This dissertation has illustrated that patrol officer perceptions can potentially be influenced by work characteristics, program awareness, and program engagement. The most impactful for these have been demonstrated to be awareness and engagement. The most relevant factors that were significant for increasing positive perceptions in both complete models were understanding the role of IOs and frequently engaging with them for assistance. Such findings would suggest that it is critical that efforts are made to ensure that ILP programs and the roles of those driving them are understood by patrol. Additionally, it is crucial that key personnel assist officers as much as possible. Such efforts should help to enhance both perceptions of and receptivity to a patrol-driven ILP program.

Patrol Officer Comments

Also, important to highlight in terms of receptivity is that even those with relatively lower average perception scores still appeared to be highly receptive to the program. This is apparent when examining the additional feedback and comments of this group. These data demonstrate very few critical comments about the IOP, with most expressing a desire to learn more about the program, become more directly involved, or advocate that it expands further. Such feedback is indicative that patrol officers believe that the IO program either is or has the potential to positively impact the patrol function and is more broadly a desirable resource.

It is also worth noting that officers also have specific suggestions for improving the program, such as educating patrol more on the IOP and what it has to offer. One particularly helpful suggestion was introducing a section on the program into something like the POST academy to ensure that all new officers are getting exposure to the program. This idea reinforces the earlier mentioned importance of advertising the program so that patrol can make informed use of it. Other important and relevant suggestions related to making the trained IOs more known to patrol and easier to contact. These included things like making contact lists of patrol IOs readily available. Such suggestions reinforce the earlier mentioned importance of expanding the awareness of the IOP and finding ways to encourage more communication and information sharing. Focusing on making IOs more recognizable and accessible seems like an important area to prioritize moving forward.

Impact of the IOP on Productivity and Proactivity

This section summarizes the key findings from the third research question. Specifically, it addresses how IO training and resources have impacted patrol officer productivity (arrests, field interviews, and incident reports) and proactivity (self-intimated calls) over time. Such findings relate directly to the observability element of factors influencing the success of the diffusion of an innovation (Rogers, 2003).

IOP Impacts on Productivity and Proactivity

Generally, results demonstrate that those who received IOP training and resources had lower productivity and proactivity in the 12 months following their training compared to the 12 months prior. These effects were small but statistically significant for arrests and medium but statistically significant for field interviews, incident reports, and

self-initiated calls. Such decreases were relatively widespread, with at least 59% of the sample experiencing declines in each measure. As mentioned previously, these findings at face value contrast what would be expected. More specifically, given the positive perceptions of how the IOP improves policing activities such as arrest, higher counts of these measures would be expected. The same is also true self-initiated calls given the support for the idea that the IOP improved the use of unassigned time.

While these findings certainly merit further exploration, there are a variety of possible explanations for the results. Three potential possibilities are offered here. First, such declines could reflect that those with IOP training and resources are spending more time assisting other officers. As a result, tangible metrics of their behavior from official data are decreasing. For example, IOP-trained officers may be assisting other officers in making arrests or providing information for their field interviews or incident reports but are not credited for these. More simply, the tangible measures of IOP trained officers' productivity decrease because they are increasing that of their fellow officers. Similar reasoning can also be applied in regard to self-initiated activities in that by spending more time assisting others, trained officers have less time to focus on self-initiated calls. In this way, perhaps one of the biggest contributions of IOs is how they facilitate the success of other patrol officers. In doing so, they are providing a meaningful contribution, but one that is harder to track with traditional police performance metrics.

A second possible explanation for the declines in productivity and proactivity could be that trained officers prioritize the quality of the measured metrics as opposed to the quantity. In this way, it may be that officers are producing better arrests that are more systematically researched as well as more detailed incident reports or thorough

participation in self-initiated calls. The additional time taken to improve the quality of measurables would reduce the opportunity to be involved in other productivity and proactivity activities, resulting in decreased counts of official activities. This explanation demonstrates the possibility of competing priorities of patrol. More specifically, it demonstrates a potential trade-off between thoroughness versus efficiency.

A third possible explanation is that the decline in productivity and proactivity metrics could reflect higher-level trends occurring within the PPD. Such trends could result from responses to external influences, such as community pressures or calls for change. Alternatively, decreasing metrics could indicate internal changes regarding department priorities. Simply put, results could be indicative of department-wide trends in decreases in productivity and proactivity metrics. While this study did account for multiple years of data, ranging from 2014-2019, if there has been a continuous decline in the measures of interest, this could be influencing the results. Evidently, the impact of the IOP on productivity and proactivity metrics requires additional attention to better understand its impacts.

Additional Factors Influencing Productivity and Proactivity

In addition to considering reasons that have contributed to the declines, it is useful to consider other factors that may have influenced productivity and proactivity metrics. The two factors that were consistently found to impact productivity and proactivity were the numbers of calls officers were dispatched to and the numbers pertaining to the previous year's relevant metric.

More specifically, increases in dispatched calls increased both productivity and proactivity. For productivity, this makes sense, as more calls would result in more

opportunities to partake in arrests, field interviews, and to write incident reports. However, it could be argued that proactivity finding was less expected. One might expect that being dispatched to more calls would reduce the opportunity to engage in self-initiated calls. One possible explanation for this finding is that perhaps being dispatched to more calls results in officers gaining greater public exposure, which may give them more opportunities to proactively address suspicious activities. This could also be further exacerbated by the fact that officers with higher call volumes may work in more active areas that provide even more opportunities for self-initiated calls. Additionally, there could also be highly motivated and driven officers wanting to get involved in high numbers of both dispatched and self-initiated activities.

The other consistent significant finding of higher pre-training metrics resulting in higher post-training metrics is somewhat predictable and demonstrates the relevance of past behavior helping to predict future behavior. In addition to these factors, one other was found to be significant in impacting productivity. More specifically, it was found that being a current IO was associated with fewer arrests in the post-training year. Such a finding complements the original findings from the section that IO training decreases the number of arrests an officer makes.

The current IO factor differentiates those who remained actively involved in the program as opposed to those who were removed from it due to a lack of participation. As such, the difference in arrests could potentially be explained by the first offered explanation for the declines, namely, that IOs are spending time increasing other's metrics at the expense of their own. Also worth noting is that officer precincts and training year had no significant impacts on productivity or proactivity. Together, these

results suggest productivity and proactivity are largely driven by current officer activity levels and past behavior.

Policy Implications and Next Steps for the IOP

As alluded to in a number of the prior sections, the findings within this dissertation have implications for agencies considering patrol-driven ILP approaches and the future of the IOP more specifically. This section addresses implications that can be gleaned from each of the key sections addressing their respective research questions.

Communication and Information Sharing

This dissertation has provided unique insight into a patrol-driven ILP program. More specifically, it has demonstrated that such a program can be useful for communication and information sharing purposes. While both of these areas can be further improved in the IOP, as also highlighted by comments in the perceptions section of this dissertation, it is clear that the program has already been perceived to be positively influencing these. Such perspectives are clearly demonstrated by IOs and their supervisors, both of which believe that the IOP, and perhaps by extension patrol-driven ILP programs, can successfully enhance communication and information sharing. Moving forward, the IOP can further optimize these areas by educating patrol on what the IOP has to offer and making IOs more well-known and accessible. Further expansion of the program and the training of more IOs would also likely further facilitate these positive outcomes.

In addition to providing a greater understanding of how communication and information sharing operate and how a patrol-driven ILP program might improve these, this dissertation has also demonstrated that such programs have great utility in regard to

information sharing. More specifically, it has been demonstrated patrol-driven ILP programs can involve the sharing and processing of information on a diverse spectrum of crimes and patrol-related activities. These various activities are addressed in various ways, but success stories demonstrate particularly great potential for suspect identification and location. Generally, this would suggest that the IOP resources greatly enhance the apprehension capabilities of patrol.

Further, the wide range of success stories pertaining to different crimes typically results in tangible outcomes such as arrest or information dissemination that could lead to these in the future. Broadly, this dissertation demonstrates that patrol-driven ILP programs can be beneficial for successfully addressing a wide array of issues. This would indicate that such programs could certainly be beneficial for departments to consider. Thus far, the IOP has been implemented in ways that are both compatible with what is familiar to patrol and relatively less complex than other alternatives. In terms of the IOP progression, the program should continue to encourage information sharing and find ways to facilitate this and incorporate even more diverse crime types to further enhance their successes to date.

One way to expand the program's benefits and address other crimes would be to use resources to be more proactive and address larger-scale or chronic issues, such as those often targeted by problem-oriented policing (Eck et al., 2013). While problem-oriented policing is more challenging to successfully implement (Cordner & Biebel, 2005; Maguire et al., 2015), the focus on intelligence could certainly help facilitate such efforts. With some additional work and dedicated resources, this approach would enhance the department’s capacity to prevent crime and respond to it.

In addition, one way to further encourage information sharing and more diverse applications of this would be to incorporate earlier mentioned suggestions from patrol, such as making IOs more accessible by providing them city-issued cellular phones and disseminating their contact information throughout patrol. Worth recognizing is that such suggestions have also been made by IO supervisors during supplementary interviews; reiterating such steps could certainly be beneficial.

Perceived Value of Patrol-Driven ILP

This dissertation examined perceptions of patrol officers, IOs, and IO supervisors on the IOP's value in terms of both patrol activities and the patrol function as a whole. Generally, all three groups were highly supportive of the program and believed that the IOP improved patrol activities, and agreed that the program was valuable to the patrol function. Such findings would suggest that these important stakeholders were all largely receptive to and supportive of the implementation of the IOP.

Further, when looking at the variation in views from patrol officers, it became clear that those who understood the role of IOs and who frequently contacted them for assistance were more positive about the program. More simply, results suggest that greater familiarity and engagement resulted in greater support and thereby receptivity to the program. As previously highlighted, even those with relatively lower perception scores called for greater expansion of the program. Such findings demonstrate that patrol-driven ILP programs do have the capacity to be well received and could be a viable innovation for other departments. Regarding key next steps for the IOP moving forward, efforts must be taken to continue growing and promoting the program and ensuring that IOs are consistently available. One element of these efforts could entail exploring

different ways to incentivize officers to engage with or participate in the IOP to help them better appreciate its utility and to reap the benefits of using it.

Productivity and Proactivity

The implications from the productivity and proactivity section of this dissertation are less clear. While it appears that receiving training and resources from the IOP decreases metrics related to productivity and proactivity, it is uncertain what may account for this and whether such changes are positive or negative for the department.
Given that the dispatched calls and past behavior are the main significant factors for explaining variation in explaining year-to-year productivity and proactivity changes, it is evident that more research must be conducted for a greater understanding of these trends. Until this has been accomplished, it is unclear what implications such findings have for the IOP program.

That being said, it is important to highlight that if declines are due to the fact that IOs are perceived and utilized as resources, this may potentially be a good thing. This is especially true given the current climate in policing in which there is greater preference expressed by the public for less enforcement activity, particularly for less serious crimes. Suppose IOs are being utilized for more serious crimes and facilitating arrests, as demonstrated by the success stories. In that case, this could be very beneficial, despite drops in official metrics. This idea is also relevant given the support for the program from various groups. Certainly, it does not seem that the declines in the examined measures are necessarily a cause for concern.

Overall, the findings for productivity and proactivity suggest that traditional metrics may not be the most useful way to evaluate the contribution of IOs. Further,

given their time-consuming role of supporting patrol and developing intelligence, it could be more effective to have dedicated full-time IOs embedded in their respective precincts. For the PPD's IOP, an excellent opportunity could be to transition those who received advanced intelligence officer training to full-time intelligence officer roles.

By removing typical patrol responsibilities from IOs, they would be able to more effectively utilize their resources to assist patrol on a regular basis and spend more time developing intelligence for the department to capitalize on. Additionally, having full-time IOs could also provide opportunities to integrate the intelligence-led approach with more problem-oriented policing strategies to address chronic issues within the precincts. This is especially true for PPD IOs who received advanced training on designing and implementing problem-oriented policing projects.

Further, utilizing a smaller number of dedicated IOs will ensure that IOs are readily available and that such endeavors are also more cost-effective in relation to costs spent on resources for IOs. However, it is worth acknowledging that this policy suggestion may meet resistance given current police officer shortages and the prioritization of ensuring patrol officer roles are filled (IACP, 2020; Police Executive Research Forum, 2019).

Limitations

Broadly, this dissertation makes numerous contributions to establishing a foundation of research on patrol-driven ILP initiatives. Yet, it is not without limitations. This section addresses each of the areas of interest for this dissertation and the potential limitations.

Communication and Information Sharing in the IOP

As highlighted above, the results on communication and information sharing in the IOP provide insight into how these may operate in an ILP driven program, what information was shared, and what successful information sharing looks like. One of the key limitations of this section that must be acknowledged is that the understanding of communication and information sharing and how the IOP impacts these are derived from perceptions. While this provides a useful starting point, moving forward, it will be important to identify methods for examining more tangible evidence of communication and information sharing. While the IORs and success stories start to get at this issue, they are still limited to work done by patrol IOs and successes as perceived by the PIC supervisor. More must be done to assess how information is shared and the outcomes that arise from this. Potential methods for addressing this area are raised in the directions for future research section.

Perceived Value of the IOP to the Patrol Function

Results from the three groups regarding perceptions related to the impacts of the IOP on patrol activities and the patrol function provided a useful foundation for examining receptivity for a patrol-driven ILP program. One limitation of the analysis was the smaller sample sizes of IOs and IO supervisors**,** which reduced the ability to examine potential variation in these groups. While it was initially planned to bolster the survey information with interviews of IO supervisors, challenges in responsiveness prevented enough of these interviews from being conducted to be a focus of the analysis.

With that said, the inability to address the variation of IOs and IO supervisors could be less of a concern given the largely consistent perspectives they shared. Further,

the patrol perceptions were able to provide some insight into factors explaining potential variation in support for the program. That being said, future research would likely benefit from considering additional factors for patrol, such as length of service or other demographics that may increase the amount of variance explained by the models examining perceptions. Worth noting is that certain demographic questions were intentionally limited to keep the survey shorter, reduce concerns about how personal information was being used, and maximize response rates for the surveys conducted for this dissertation.

Impact of the IOP on Productivity and Proactivity

As previously highlighted, results demonstrated that the IOP decreased measures of productivity and proactivity. While such findings warrant much further exploration, it is important to note that one key limitation of this analysis was that it only included patrol officers who had received intelligence officer training. To get a more complete understanding of the impacts of the IOP, these must be contextualized within other patrol officers' productivity and proactivity. While this was not able to be included in this dissertation due to data challenges, it is an area that will be addressed moving forward. Further, while not necessarily a limitation, it is also important to reiterate that all of the measures examined were for measures in which the patrol officers were the primary individual. As such, other arrests, field interviews, and incident reports they contributed to were not addressed by the analyses conducted. More research is needed to get at the totality of the contribution of both patrol officers who have and those who have not had IOP training.

Directions for Future Research

Given the findings, implications, and limitations of this dissertation, there are many avenues for research that can be explored. This section addresses some potential ideas for each of the key areas addressed.

Communication and Information Sharing

While the initial exploration of communication and information sharing in the IOP provided some unique insight into a patrol-driven ILP program's operations, there are opportunities to expand this further and address some of the aforementioned limitations. For example, while this dissertation examined communication and information sharing patterns and information shared by IOs and related success stories, steps should be taken to take a closer examination of how patrol officers are communicating and what sorts of information they are sharing. Such an examination could provide a greater understanding of the benefits of patrol-driven ILP efforts and further inform how communication and information sharing could be improved or potentially implemented in other departments.

Perceived Value of Patrol-Driven ILP

Despite this dissertation providing impacts on a variety of important policing personnel regarding perceptions and receptivity to patrol-driven ILP, there remain additional areas for exploration. An important element of building on existing work will entail considering additional potentially relevant factors to perceptions and examining the consistency of the perceptions of the IOP over time. Such an assessment is needed to see if the current support for the program remains as it expands. Given challenges with implementing innovative programs and the evolution of the program with turnover and

leadership changes, it is critical to ensure that the program maintains the momentum of support to ensure its longevity.

In addition to monitoring the existing groups of interest, there could also be a benefit in gauging the program's support and receptivity from higher-ups, such as executive personnel. The support of this group is crucial to ensure that the IOP remains a priority. In addition, surveying the community on their perceptions regarding ILP strategies could also be beneficial. Given the potential for misperceptions or skepticism by the public of the concept of intelligence more broadly, it could be useful to better understand their perspectives. This is especially relevant given current national tensions between the public and the police.

One other important area, which is also tied to the following section, is testing to see if perceptions regarding the IOP's value for patrol activities and the patrol function match what is observed more tangibly. One way to address this will be to follow cases related to IORs through the PPD's record management system to determine how these progressed. Further, it will be useful to determine whether such cases resulted in prosecutions and convictions after arrests were made.

Productivity and Proactivity

The impacts of the IOP on productivity and proactivity is an area that certainly warrants attention given the unexpected declines and unclear reasoning behind this. The first step I plan on taking to address this is testing the earlier mentioned explanations. One key part of this approach will entail comparing trends of both productivity and proactivity between patrol IOs and non-IOs to identify similarities and differences in these areas over time. Central to this will be determining whether there was a more

general trend of declines and whether these were of the same magnitude. In addition, as mentioned in the limitations section, officer activity in which they were not the primary officer must also be considered to get a more holistic view of program impacts. Understanding potential differences and factors will be important, both within the context of explaining what is occurring within the IOP context and more generally demonstrating how a patrol-driven ILP program may impact productivity and proactivity.

Conclusion

The implementation of a patrol-driven, citywide ILP program is a progressive innovation, and how ILP operates in the patrol context has gone largely unevaluated. Through its examination of the PPD's IOP, this dissertation has illustrated how communication and information sharing may function and be utilized, demonstrated the high level of receptivity to the approach and factors influencing it, as well as identified potential impacts of the program on officer productivity and proactivity.

While there is much research to be done on patrol-driven ILP programs, particularly in regard to their impact on traditional policing metrics, the initial research presented suggests that there are certainly benefits making the approach worthy of consideration. This is especially true given current police reform focused on increasing officer effectiveness and efficiency, as well as focusing on more chronic problems. Further, as contemporary events such as the January 2021 Capitol Riots have demonstrated, communication and intelligence development are paramount for effective policing, and their absence can have dire consequences.

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APPENDIX A

PATROL OFFICER SURVEY

AN EVALUATION OF THE PHOENIX POLICE DEPARTMENT INTELLIGENCE OFFICER PROGRAM

RESEARCH PROCEDURES

This research is being conducted by Arizona State University to examine police officer knowledge and views about the Intelligence Officer (IO) program in the Phoenix Police Department. The research involves two surveys administered approximately six months apart to examine officer knowledge and views over time. If you agree to participate, you will be asked to complete the following survey. The survey should take about 10 (ten) minutes to complete. You have the right not to answer any question, and to stop participation at any time.

RISKS

There are no foreseeable risks or discomforts to your participation in this research.

PARTICIPATION

Your participation is voluntary, and you may withdraw from the study at any time and for any reason. Consenting to participate in the survey today does not obligate you to complete any follow-up surveys. If you decide not to participate or if you withdraw from the study, there is no penalty or loss of benefits to which you are otherwise entitled. There are no costs to you or any other party.

CONFIDENTIALITY

Your responses will be confidential. The results of this study may be used in reports, presentations, or publications but your name will not be used. Your Phoenix Police Department serial number will be used to link your responses from this survey to future surveys, but information you provide on this survey will only be shared in aggregate form. Only the research team at Arizona State University will have access to your individual survey responses.

CONTACT

This research is being conducted by Dr. Cody Telep in the School of Criminology and Criminal Justice at Arizona State University. Cody Telep can be reached at cody.telep@asu.edu or 602.496.1295. If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board, through the ASU Office of Research Integrity and Assurance, at 480.965.6788.

CONSENT

By completing the following survey, you are providing your consent to participate in this study. To help ensure the confidentiality of the survey, you do not need to sign any form. If you do not wish to participate, you can stop the survey now.

1. What is your Phoenix PD officer serial number?

_____

2. How familiar are you with the intelligence officer (IO) program in 500 Precinct?

____ Very familiar
____ Somewhat familiar
____ Not familiar

3. When did you first hear about the IO program?

____ In the past 6 months
____ 7- 12 months ago
____ 13-24 months ago
____ More than 24 months ago
____ Never heard of it

4. How often do you see one or more IOs when you are on duty?

____ A few times a day
____ A few times a week
____ A few times a month
____ Less than once a month

5. How often do you communicate with one or more IOs either in person or by email, text, phone, or radio?

____ A few times a day
____ A few times a week
____ A few times a month
____ Less than once a month

6. Have you ever called for an IO to assist at an incident or scene?

____ Yes
____ No

7. How many times have you called for an IO to assist at an incident or scene?

____ 0
____ 1
____ 2-5
____ More than 5

8. Have you ever provided information about a call, incident, case, or crime issue to an IO?

____ Yes
____ No

9. How often do you provide this type of information to IOs?

____ Very frequently
____ Frequently
____ Occasionally
____ Infrequently

10. Has an IO ever provided information about a call, incident, case, or crime issue to you?

____Yes
____No

11. How often do IOs provide this type of information to you?

____Very frequently
____Frequently
____Occasionally
____Infrequently

12. In general, would you say you understand the role of intelligence officers?

____Yes
____No

13. Please indicate your level of agreement with the following statements:

	Strongly agree	**Agree**	**Disagree**	**Strongly disagree**
The IO program is a good resource for patrol officers working in 500 Precinct				
The IO program has been helpful to, or benefited, me personally				
Having IOs working in the field in 500 Precinct makes the job easier for patrol officers				
The IO program takes valuable resources away from patrol				
The benefits of the IO program outweigh the costs				

14. In general, how do you think the IO program has affected the following activities in 500 Precinct?

	Greatly improved	**Improved**	**No difference**	**Made worse**
The ability to gather intelligence on repeat offenders and crime hot spot locations				
The ability to conduct detailed and thorough investigations				
The ability to make efficient use of unassigned time (not responding to calls)				
The ability to make breakthroughs in cases leading to an arrest				

15. Below are the names of the current Phoenix Intelligence Center (PIC) IOs. How often do you receive assistance from each of these officers?

	Very frequently	**Frequently**	**Occasionally**	**Infrequently**	**Not at all**
PIC IO 1					
PIC IO 2					
PIC IO 3					

16. How familiar are you with the PIC and its capabilities?

____ Very familiar
____ Somewhat familiar
____ Not familiar

17. Over the past year, how often have you contacted the PIC for any reason?

____ Very frequently
____ Frequently
____ Occasionally
____ Infrequently
____ Not at all

18. Below are the names of the current precinct/patrol IOs working in 500 Precinct. How often do you receive assistance from each of these officers?

	Very frequently	**Frequently**	**Occasionally**	**Infrequently**	**Not at all**
IO 1					
IO 2					
IO …					

19. How familiar are you with problem-oriented policing (POP)?

____ Very familiar
____ Somewhat familiar
____ Not familiar

20. Are you interested in becoming an IO?

____ I have already completed IO training
____ Yes
____ No

21. Any other comments or feedback about the intelligence officer program?

_____
_____
_____

22. What is your current shift assignment?

____ Day shift
____ Swing shift
____ Grave shift
____ Other:
_____

23. How satisfied are you with your job?

____ Very satisfied
____ Satisfied
____ Somewhat satisfied
____ Unsatisfied
____ Very unsatisfied

24. In the past 6 months, has your job satisfaction …

____ Improved
____ Not changed
____ Gotten worse

25. What is your current rank/role?

____ Patrol officer
____ Sergeant
____ Lieutenant

26. How long have you been working in 500 precinct?

____ Less than 3 months
____ Between 3 and 6 months
____ Between 7 and 9 months
____ Between 9 and 12 months
____ More than a year

APPENDIX B

INTELLIGENCE OFFICER SURVEY

PHOENIX POLICE DEPARTMENT
INTELLIGENCE OFFICER (IO)
PROGRAM SURVEY

OFFICER SERIAL NUMBER: _____

1. When did you complete the IO school?
- □ In the past 6 months
- □ 7-12 months ago
- □ 13-18 months ago
- □ More than 18 months ago

2. What made you want to be part of the IO program (check all that apply)
- □ Access to databases
- □ Attend the 40 hour school
- □ AZPOST training certification
- □ Exposure to other IOs
- □ Interest in intelligence
- □ Resume building/future career aspirations
- □ Selected by supervisor
- □ Other _____

3. How familiar is your Supervisor with the IO program?
- □ Very familiar
- □ Familiar
- □ Somewhat familiar
- □ Unfamiliar

4. How supportive is your Supervisor of the IO program?
- □ Very supportive
- □ Supportive
- □ Somewhat supportive
- □ Unsupportive
- □ Very unsupportive

5. How often do you see another IO when you are on duty?
- □ Daily
- □ Weekly
- □ Monthly
- □ Less than once a month

6. How often do you communicate with another IO, either in person or by email, text, phone or radio?

- □ Daily
- □ Weekly
- □ Monthly
- □ Less than once a month

7. How has the IO program changed the frequency with which you communicate with other officers?
- □ Increased
- □ No Change
- □ Decreased

8. Have often do you communicate with personnel at the Phoenix Intelligence Center (PIC)?
- □ Daily
- □ Weekly
- □ Monthly
- □ Less than once a month

9. How many intelligence officer reports did you submit to the intelligence officer reporting system (IORS) in 2019?
- □ Zero
- □ One
- □ Two-five
- □ Six-ten
- □ More than ten

10. What challenges/obstacles, if any, do you face in submitting IORS? (check all that apply)

□ Ability to utilize resources without PIC assistance
□ Current assignment does not provide relevant information for the program
□ Expired passwords
□ Lack of time
□ Technology challenges – internet/MDC/etc.
□ Unsure how to enter IORS
□ Unsure of intelligence requirements
□ Other _____

11. In an average week, how much time on duty do you spend on activities related to being an IO?

□ No time
□ Less than an hour
□ One-two hours
□ More than two hours, but less than four hours
□ More than four hours

12. How has the IO program changed the frequency with which you share information with other officers?

□ Increased
□ No Change
□ Decreased

13a. Have you ever provided information to another officer (non-IO) about a call, incident, case, or crime issue?

□ Yes
□ No (SKIP TO Q14a)

13b. How often do you provide other officers this type of information?

□ Very frequently
□ Frequently
□ Occasionally
□ Infrequently/rarely

14a. Has another officer (non-IO) ever provided you information about a call, incident, case, or crime issue?

□ Yes
□ No (SKIP TO Q15)

14b. How often do other officers provide you this type of information?

□ Very frequently
□ Frequently
□ Occasionally
□ Infrequently/rarely

15. Have you ever used resources available to you as an IO (i.e., database access) to research a call, incident, case, or crime issue?

□ Yes
□ No

16. How often do you use resources available to you as an IO?

□ Daily
□ Weekly
□ Monthly
□ Less than once a month
□ Never

17. What amount of your time performing IO duties is spent on: (percentage bar)

a. Hot spots
b. Individual/specific cases
c. Recurring victims/targets
d. Repeat offenders

18. Please indicate if you strongly agree, agree, disagree, or strongly disagree with the following statements:

A. The IO program is a good resource for patrol officers.	□ Strongly agree □ Agree □ Disagree □ Strongly disagree
B. The IO program has been helpful to, or benefited, me personally.	□ Strongly agree □ Agree □ Disagree □ Strongly disagree
C. Having IOs working in the field makes the job easier for patrol officers.	□ Strongly agree □ Agree □ Disagree □ Strongly disagree
D. Having IOs working in the field makes the job easier for supervisors.	□ Strongly agree □ Agree □ Disagree □ Strongly disagree
E. The IO program takes valuable resources away from patrol.	□ Strongly agree □ Agree □ Disagree □ Strongly disagree
F. The benefits of the IO program outweigh the costs.	□ Strongly agree □ Agree □ Disagree □ Strongly disagree

19. In general, how do you think the IO program has affected the following police activities in your precinct?

A. The ability to gather intelligence on repeat offenders and crime hot spot locations.	□ Greatly improved □ Improved □ No difference □ Made worse
B. The ability to conduct detailed and thorough investigations.	□ Greatly improved □ Improved □ No difference □ Made worse
C. The ability to make efficient use of unassigned time (not responding to calls).	□ Greatly improved □ Improved □ No difference □ Made worse
D. The ability to make breakthroughs (e.g., identifying suspects) in cases leading to an arrest.	□ Greatly improved □ Improved □ No difference □ Made worse
E. The ability to conduct crackdowns, stings, and other undercover operations.	□ Greatly improved □ Improved □ No difference □ Made worse

20. Below are the names of the four current HDB PIC IOs. How often do you have contact or interact with each of these IOs?

PIC IO 1	□ Very frequently □ Frequently □ Occasionally □ Infrequently/rarely □ Not at all
PIC IO 2	□ Very frequently □ Frequently □ Occasionally □ Infrequently/rarely □ Not at all
PIC IO 3	□ Very frequently □ Frequently □ Occasionally □ Infrequently/rarely □ Not at all
PIC IO 4	□ Very frequently □ Frequently □ Occasionally □ Infrequently/rarely □ Not at all

21. How useful did you find the 40-hour IO school for preparing you to be an IO?
□ Very useful
□ Useful
□ Somewhat useful
□ Not at all useful

22. How useful did you find the shadow and radio training day at the PIC for preparing you to be an IO?
□ Very useful
□ Useful
□ Somewhat useful
□ Not at all useful

23. What would make training for the IO program more useful? (Check all that apply)
□ Longer training school
□ Shorter training school
□ More shadows with PIC IOs
□ More training time in the PIC on school topics (databases etc.)
□ Coverage of other topics
Specify:_____
□ Removal of current topics
Specify: _____
□ Other: _____

24a. Is the IO program what you expected it to be?
□ Yes
□ No

24b. How, if at all, is it different from what you anticipated?
_____
_____
_____

25a. Have you completed the Advanced IO school?
□ Yes (Skip to AIO Questions, see next page)
□ No

25b. Would you be interested in participating in an advanced IO training school?
□ Yes
□ No

26. Are there other types of training that you would like to see made available for current IOs?
_____
_____
_____

27. What precinct do you work in?
□ 200
□ 400
□ 500
□ 600
□ 700
□ 800
□ 900
□ Other/Specialty Unit

28. In general, how satisfied are you with your job?
□ Very satisfied
□ Satisfied
□ Somewhat satisfied
□ Unsatisfied
□ Very unsatisfied

29. In the past six months, has your job satisfaction …
□ Improved
□ Not changed
□ Gotten worse

30. What is your current rank/role?
□ Patrol officer
□ Detective
□ Sergeant
□ Other: _____

31. What is your current shift assignment?

□ First shift
□ Second shift
□ Third shift
□ Other: _____

32. Do you have any other feedback you would like to share about the IO program?

_____

_____

_____

_____

Advanced Intelligence Officer (AIO) Questions

Now that you have had some time in the field since the AIO school in June 2019, please answer the following questions:

Since completing the advanced school, how have the following areas changed?

A. Time spend on IO activities	□ Increased □ About the same □ Decreased
B. Amount of communication with other IOs	□ Increased □ About the same □ Decreased
C. Amount of communication with other non-IOs	□ Increased □ About the same □ Decreased
D. Amount of communication with PIC/PIC IOs	□ Increased □ About the same □ Decreased

What resources have you used since the AIO training (select all that apply)?

□ Beat books
□ CARU data
□ LinX
□ OIS/Critical incident training
□ POP center
□ RissIntel
□ Web Coplink

What resources from the Advanced IO school have been the most helpful?

1)
2)
3)

Have you had the opportunity to use any of your AIO training related to problem-oriented policing or the SARA model?

□ Yes
□ No

In what ways have you used your problem-solving training?

_____
_____

In general, do you feel like your advanced training is well-utilized by your supervisor and precinct?

□ Yes
□ No

Why or why not? How do you think this could be improved?

_____
_____

What was the most valuable part of the AIO school?

_____
_____

What was the least valuable part of the AIO school?

_____
_____

Are there other types of training that you would like to see in future Advanced IO schools?

_____
_____

APPENDIX C

INTELLIGENCE OFFICER SUPERVISOR SURVEY

PHOENIX POLICE DEPARTMENT INTELLIGENCE OFFICER (IO) PROGRAM SURVEY

1a. Do you currently have an Intelligence Officer (IO) on your squad?
□ Yes
□ No
□ Unsure

1b. How many IOs do you currently have on your squad?
_____

2. How long have you had an IO on your squad?
□ Less than 6 months
□ 7-12 months
□ 13-18 months
□ More than 18 months

3. How familiar are you with the IO program?
□ Very familiar
□ Familiar
□ Somewhat familiar
□ Unfamiliar

4. How would you describe the purpose of the IO program?
_____
_____
_____

5a. How often do you request IO-related help from an intelligence officer on your squad?
□ Daily
□ Weekly
□ Monthly
□ Less than once a month
□ Never

5b. Roughly, how many times have you requested assistance from an IO on your patrol squad?
_____

6a. Have you ever requested help from an IO on a different patrol squad?
□ Yes
□ No

6b. Roughly, how many times have you requested assistance from an IO on another patrol squad?
_____

7a. Have you ever requested help from a Phoenix Intelligence Center (PIC) Intelligence Officer or Intelligence Analyst? (N squad)
□ Yes
□ No

7b. Roughly, how many times have you requested assistance from a PIC IO?
_____

8. Please indicate if you strongly agree, agree, disagree, or strongly disagree with the following statements:

A. The IO program is a good resource for patrol officers.	□ Strongly agree □ Agree □ Disagree □ Strongly disagree
B. The IO program has been helpful to, or benefited, me personally.	□ Strongly agree □ Agree □ Disagree □ Strongly disagree
C. Having IOs working in the field makes the job easier for patrol officers.	□ Strongly agree □ Agree □ Disagree □ Strongly disagree

D. Having IOs working in the field makes the job easier for supervisors.	□ Strongly agree □ Agree □ Disagree □ Strongly disagree
E. The IO program takes valuable resources away from patrol.	□ Strongly agree □ Agree □ Disagree □ Strongly disagree
F. The benefits of the IO program outweigh the costs.	□ Strongly agree □ Agree □ Disagree □ Strongly disagree

9. In general, how do you think the IO program has affected the following police activities in your precinct?

A. The ability to gather intelligence on repeat offenders and crime hot spot locations.	□ Greatly improved □ Improved □ No difference □ Made worse
B. The ability to conduct detailed and thorough investigations.	□ Greatly improved □ Improved □ No difference □ Made worse
C. The ability to make efficient use of unassigned time (not responding to calls).	□ Greatly improved □ Improved □ No difference □ Made worse
D. The ability to make breakthroughs (e.g., identifying suspects) in cases leading to an arrest.	□ Greatly improved □ Improved □ No difference □ Made worse
E. The ability to conduct crackdowns, stings, and other undercover operations.	□ Greatly improved □ Improved □ No difference □ Made worse

10. How has the IO program impacted communication between officers at the patrol level?

□ Increased
□ No Change
□ Decreased

11. How has the IO program impacted information sharing at the patrol level?

□ Increased
□ No Change
□ Decreased

12. What precinct do you work in?

□ 200
□ 400
□ 500
□ 600
□ 700
□ 800
□ 900
□ Other/Specialty Unit

13. What is your current rank/role?

□ Sergeant
□ Lieutenant
□ Other : _____

14. How long have you been a supervisor?

□ Less than 6 months
□ 7-12 months
□ 13-18 months
□ More than 18 months

15a. Would you be willing to participate in a brief in-person/telephone follow up interview to further discuss the IO program?

□ Yes
□ No

15b. If so, how would you prefer to be contacted?

□ Phone _____

□ Email _____

16. What do you see as the benefits of the IO program?

_____

_____

_____

17. Do you have any concerns with the IO program?

_____

_____

_____

18. How would you improve the IO program?

_____

_____

_____

19. Do you have any other feedback you would like to share about the IO program?

_____

_____

_____

APPENDIX D

INTELLIGENCE OFFICER REPORT FORM

1. IO Name

2. Date of Report

3. IORs Number (will be automatically set when form is saved)

4. CAD Incident Number

5. Squad Area

6. Title

7. Category
    - A. Criminal Group / Repeat Offender
        - Repeat Offender (check box)
            - Name, Date of Birth (DOB),
            - Terror Threat?
            - Terrorist Screening Center (TSC) check complete?
                - Level of threat
        - Gang Name
        - Cartel
        - Criminal Organization
        - Other (Specify)
    - B. Recurring Target
        - Repeat Victim
            - Name, DOB
        - Repeat Target
            - Residence
                - Address
            - Commercial establishment
                - Name, Address
            - Physical target
                - Description, address/approximate location
    - C. Crime Hot Spot
        - Hot Spot Type
            - Drug Activity, Violent Crime, Property Crime, Other
    - D. Specific Case
        - Crime Type
            - Drug Activity, Violent Crime, Property Crime, Other
            - Suspect (If Known), Name, DOB
            - Location Address/Intersection

8. At what approximate address or intersection was this intelligence gathered? (Include closest intersection)

9. What was the nature of the activity that you observed or information you gathered? (Check all that apply)

Terrorist threat, Drug market activity, Person-on-person violence, Property crime, Public disorder, Suspicious Activity, Other

10. Provide a brief narrative of the intelligence gathered

11. How did you gather this piece of intelligence? (Check all that apply)
Confidential Informant, Personal Observation, Consensual Contact / Investigative Detention, Surveillance, Another Police Officer, Another Criminal Justice Agency, Interview / Conversation with Citizen

12. How would you rate the source of this information?
(Reliable/usually reliable/unreliable/unknown)
12a. State reason for rating
12b. Source's Motivation

13. How would you rate the validity of this information?
(Confirmed/probable/doubtful/cannot be judged)
13a. State reason for rating

14. How many people is this situation affecting?
(One person/small group/whole community/unknown)

15. Do you think the focus of your intelligence gathering is for a larger recurring problem that should be a candidate for a team-based response?
Yes/No/Unsure (more investigation needed)

16. To your knowledge, is this IORs report linked to another IORs report?
Yes/No

IORs Number(s) –

17. What actions did you take based on this intelligence? (Check all that apply)
A. Made an arrest
Name DOB
B. Wrote a citation
Name DOB
C. Gave a verbal warning
Name DOB (if known)

D. Wrote a field contact report
FI#
E. Wrote an intelligence report
IRRR#
F. Wrote a departmental/incident report
DR#
G. Submitted tip to ACTIC Tips & Leads System
ACTIC #
H. Interviewed/followed up with a suspect(s) or potential suspect(s)
Name DOB
I. Interviewed/followed up with a victim
Name
J. Interviewed/followed up with a citizen
Name
K. Followed up with another criminal justice agency
Name
L. Other resources used
Internal
External
M. Other (Specify)

18. Did another IORs report make it possible for you to take any of these actions?
Yes/No
IORs Number (s)

19. What are your suggestions on how to proceed with this situation in the long-term?

20. POST COMMENTARY / FEEDBACK HERE. CITE YOUR NAME, SERIAL #, DATE, AND TIME WHEN POSTING.

Reviewed by, Assigned To (serial # & Last Name), Status, Date completed
Disposition
ACTIC Tips & Leads
Intelligence Report Submitted
Linked to other IORs
No Further Information
Referred to Other Unit
Success (Success/No Arrest, Success/Arrested, Arrested)