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Data-informed community engagement

The Newark Public Safety Collaborative

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Abstract

This chapter will discuss a program that brought evidence-based practices to a community public safety initiative in Newark, NJ. The Newark Public Safety Collaborative (NPSC) bridges the gap between academic research and local community stakeholders through a collaborative process of data analysis that maximizes existing resources to prevent crime and enhance public safety in evidence-based ways. After a one-year period, a total of 28 community partner organizations joined the NPSC, representing groups of varying sizes and capacities, as well as corporations, healthcare providers, real estate developers, law enforcement, city hall officials, among others. The strong working relationship between NPSC data analysts and community organizations creates opportunities to deeply understand local needs, and to inform current efforts with reliable data insights. As part of this process, community groups participate in a monthly forum where everyone is presented with updated data and analytics to engage in a conversation that identifies new priorities and immediate solutions to the most pressing crime problems.

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Introduction

Law enforcement has come under intense scrutiny due to the events that led to the deaths of multiple individuals under police custody. In particular, the death of George Floyd during his arrest on May 25, 2020 ignited a national movement across the United States (US), and around the globe, demanding extensive police reforms, an end to systemic racism, and the divestment of law enforcement resources in favor of community-led public safety programs. As reported by *The New York Times* (see Stockman & Eligon, 2020), some cities across the US began to re-evaluate police department budgets and to rethink whether police officers were being asked to do jobs they were never intended or trained to do. Some of these tasks include addressing homelessness, drug abuse, or mental illness. Police often agree that it is not their job to address some of the underlying social conditions that give rise to expression of criminal behavior. As recently noted by Meares (2017), "it is unfair to expect the police to solve what is fundamentally a social safety net problem with the crude tools of crime fighting simply because they are available twenty-four hours a day." Meanwhile, community activists have long demanded an expansion of civic engagement programs to involve the public in programs that enhance community safety and wellness (see Skogan, 2006b).

Debates over defunding the police often respond to a growing public desire to reimagine public safety through a process that transfers some police responsibilities

back to the community. Such a transformative process has the potential of benefitting both community advocates and law enforcement agencies. It will allow police departments to focus their resources and expertise on their strengths while empowering community organizations to increase their capacity for reducing violence, engaging in problem-solving activities, and mobilizing non-law enforcement resources where needed the most. As noted by Skogan (1988), "police and other elements of the criminal justice system cannot effectively deal with crime and fear on their own." In this sense, a multi-stakeholder collaborative process between the community, law enforcement, and other local agencies, that goes beyond superficial collaborations of the past, offers a unique opportunity to address the current legitimacy crisis in policing (Meares, 2017). Still, an interagency partnership among multiple community stakeholders requires access to independently produced data and analytics to identify priorities and inform the decision-making process of community stakeholders. To date, such capacity remains largely in the hands of police departments who control both the data and the messages informed by it. As discussed by Skogan (2006b), police use of data tends to align with top management's objectives and not necessarily with community priorities. But, of course, this could be partly due to unrealistic expectations that police leadership believes are set for their departments as they're primarily tasked with solving complex crime problems. In sum, reforming policing requires embracing new expectations for crime prevention that shares the burden of public safety with multiple stakeholders.

This chapter will present the Newark Public Safety Collaborative (NPSC), a public safety initiative developed at the Rutgers-Newark School of Criminal Justice, which operationalizes the data-informed community engagement (DICE) framework and applies it to serve the City of Newark (see Caplan & Kennedy, 2019). Under the DICE framework, NPSC seeks to (1) democratize the use of data and analytics, (2) empower community organizations to become co-producers of public safety, and (3) mobilize community resources and expertise to problem-solve Newark's most pressing crime issues. Public safety is reimagined as a holistic process by which community agencies, including police, participate to share the burden of public safety. In this process, community-based organizations, police and other local stakeholders, obtain equal access to data and analytics to solve problems and make decisions in a coordinated fashion. Data informs decision-making processes of multiple community stakeholders which becomes, in and of itself, an important innovation from past collaborations between the community and the police. This collaborative process requires strong support and endorsement by city government officials and private organizations to create a robust institutional framework that sustains community-sponsored public safety programs and activities. The result is a sustainable multi-stakeholder strategy, informed by data and analytics, capable of responding to multiple crime problems.

The extant literature on community policing (see Brogden & Nijhar, 2013; Cordner, 1997; Gill et al., 2014; Lyons, 2002; Mastrofski, 1998; Moore, 1992;

Skogan, 2004; Skogan & Hartnett, 1999; Trojanowicz & Bucqueroux, 1998) addresses some of the existing dynamics that define the relationship between the community and the police. In a 1997 survey conducted by the Police Foundation, 85 percent of police departments claimed to have adopted community policing initiatives or to be in the process of doing so (Skogan, 2006b). But what does community policing really mean? For some departments, it means creating a special neighborhood unit with dedicated officers; for others, it may involve a complete overhaul of the entire agency and its mission. To community advocates, community policing could mean that residents engage in creating active neighborhood watch groups to take direct action, while others may see it as a form of civic engagement whereby residents are invited to speak up and notify police if they see something suspicious (Skogan, 2006a). Community police varies dramatically from place to place across the United States. Generally speaking, it is often police department-led and lacks a transparent data- and analysis-sharing process that informs the working relationship between the police and the community.

To some scholars (see Gill et al., 2014; Trojanowicz and Bucqueroux, 1998), these challenges can be attributed to the fact that community policing is a philosophy and not a program, tactic, or strategy. As noted by Gill et al. (2014: 402), "unlike other police innovations like hot spots or problem-oriented policing, Community Oriented Policing is a philosophy or guiding framework for implementing strategies, and not a strategy on itself." Trojanowicz and Bucqueroux (1998) suggest that

because community policing is a philosophy, police departments need to be willing to devote time, energy, and resources to implement this new form of decentralized police service. This explains why community policing efforts of the past have relied heavily on police-centric responses to crime problems, resulting in an unbalanced relationship between police and members of the communities they serve. As a result, this creates an asymmetric relationship, further aggravated by unequal access to data and analytics, with police departments controlling the public safety agenda with limited citizen input.

Other scholars (see Mastrofksi, 2006; Skogan, 2006a) point to the difficulties in changing police culture as another challenge in implementing community policing. The Chicago community policing experiment in the 1990s showed how attempts to effectively engage local community groups were unsuccessful, to some extent, due to police appearing to be in charge, while residents and other stakeholders were left as subordinate partners (Mastrofksi, 2006). Lyons (2002) suggests that "citizens were not invited to analyze the problems, develop responses, or assess the success of problem-solving efforts." A dynamic for power and control between the police/government leaders and community interest groups may have been deleterious to a successful and sustainable partnership between the two groups. To Skogan (2006b), the three core elements of traditional community policing should include organizational decentralization, citizen involvement, and problem-solving. Still, most community policing programs continue to be under the control of police agencies and

focused on law enforcement activities, significantly reducing community groups'
ability to engage in public safety efforts.

Data-informed community engagement

In the city of Newark, New Jersey, the NPSC offers an alternative to traditional
community policing models because it relies on the coproduction of public safety by
multiple community stakeholders. The NPSC operationalizes the DICE framework to
diagnose crime problems and develop place-based strategies to disrupt risk narratives
in a coordinated manner. It builds from past successes of problem-oriented policing
(Clarke, 2002; Goldstein, 1990) and risk-based policing (Kennedy, Caplan, and Piza,
2018) and incorporates elements of civic engagement that mobilize community assets
to where they are needed most. Under the NPSC, shared data and analytics become
common denominators informing community stakeholders' decision-making
processes and actions. The result is an impactful, comprehensive, sustainable, and
transparent crime prevention strategy.

To diagnose the underlying conditions that give rise to criminal behavior,
NPSC utilizes Risk Terrain Modeling (RTM). RTM is grounded in the literature on
environmental criminology (Cohen & Felson, 1979; Cornish & Clarke, 1986
Brantingham & Brantingham, 1993) and risk assessment (Kennedy & Van Brunschot,
2009) and is based on the premise that criminal behavior is influenced by the physical
environment's crime attractors and generators (Brantingham & Brantingham, 1995).

As noted by Caplan and Kennedy (2016), RTM was developed to identify the risks that come from features of a landscape and to model how these co-locate to create unique behavior settings for crime. RTM data analyses offer the advantage of not only identifying *where* crime is concentrated but also *why* these incidents are more prone to occur in some places. This information can be critical for conducting problem-solving activities with community stakeholders because it provides key insights that unlock risk narratives explaining why crime clusters at some places and not others.

To illustrate this with an example, at a community meeting in Newark's Fairmount neighborhood, NPSC analysts shared with various community stakeholders a report pertaining to the persistence of aggravated assault incidents near a number of liquor store locations. This finding is consistent with previous research by Gorman et al. (2001) on the spatial association between alcohol outlets and elevated rates of violent crime and incivilities. The results shared with community group representatives included risk maps and a list of addresses for all liquor store locations identified using RTM. The reaction from participants in that meeting made it clear that locals were, even before receiving the data, concerned with the presence of various forms of illegal activity near or within proximity to liquor stores. A resident even mentioned that she had witnessed from her apartment recurring gatherings of people near one of the identified liquor stores during nighttime hours. One of the residents then claimed that poor lighting was another concern in various parts of the neighborhood, including liquor store locations. The realization that these gatherings

tend to occur during nighttime hours near liquor store businesses prompted the reaction of a representative from the local utility company who offered to provide floodlight installations, directly mounted on streetlight poles, across all businesses wishing to participate in this crime reduction program. In sum, this example highlights the importance of place-based analytics, like RTM, as a tool to validate personal observations, catalyze conversations, and engage community stakeholders in problem-solving activities that mobilize existing resources where needed the most.

The Newark Public Safety Collaborative

Established in 2018, the NPSC was formed to foster community participation in public safety. To date, NPSC has brought together over 40 different local stakeholders, including community-based organizations of varying sizes,[1] government agencies, law enforcement, businesses and corporations, and developers. It is a diverse group of community agencies with varying experiences, expertise, and capacities thereby enabling multiple simultaneous responses to different crime problems. These responses are ignited by access to data and analytics, but the solutions are driven by individual efforts among all partner organizations who share the common objective of improving public safety in the city of Newark.

The individual/localized actions of participating community-based organizations foster collective efficacy (Sampson et al., 1997) as the combined effect of their data-informed, coordinated, efforts brings change to the community as a

whole. Sampson et al. (1997) noted that the association of contexts of social disorganization and residential instability with violence could be mediated by collective efficacy. This is particularly critical in socially disorganized neighborhoods that present lower collective efficacy and fewer community organizations. Research conducted in Chicago during the 1970s and 1980s showed that high crime areas tend to be underserved by community organizations ready to take action, while locations presenting myriad block group associations and community organizations show a higher turnout in police-sponsored programs (see Skogan, 1988). As a result, sustaining community engagement programs and mobilizing resources can be particularly challenging in areas that need them the most. As noted by Skogan (2006b), people living in high crime neighborhoods are more suspicious of their neighbors, a reality that further reduces the chances of community involvement. To overcome this gap and foster civic engagement requires data and analytics that help community organizations identify problem areas and direct resources to the most vulnerable places.

Through the use of data and analytics, community-based organizations and other local stakeholders can increase their operational capacity, set measurable outcomes, and improve strategies that match their own unique missions. Community-sponsored programs need not be constrained by artificial geographic or political boundaries because community-based organizations can now justify expanding their efforts to areas in greatest need based on reliable data and analyses that are also

accessible to other organizations. To sustain community engagement efforts in public safety requires rethinking public–private partnerships and information sharing (Skogan & Hartnett, 1999). Data-informed opportunities for collaboration foster community engagement and multi-stakeholder involvement, which brings with it funding and resources to support crime prevention activities.

Democratizing data and analytics by making this information accessible to community organizations becomes a critical element of DICE and NPSC. As previously noted, access to data and other public safety information has traditionally been reserved for the police and some academic circles. By making data and analytics (and related technologies) more accessible, community stakeholders are empowered to utilize a key resource previously not available to them and engage in problem-solving activities that mobilize resources because empirical evidence justifies their need. For example, community organizations were unaware that violent crime was concentrating near ATM locations during daytime hours. Upon being presented with this data, a community member spoke up and shared with the group that, due to COVID-19 restrictions, banks were closed in his neighborhood. This situation was forcing people to withdraw cash from ATMs located on the street. Another partner organization explained that the current increase in unemployment could explain why more people are victimized near these locations. Lastly, a police captain asked for additional information regarding the location of these ATMs to better understand whether these risky locations are mostly on the street or within retail (e.g.,

pharmacies, bodegas, etc.). This conversation quickly led to a discussion between NPSC community partners and the police to develop a collective strategy near this subset of criminogenic locations. Again, this example illustrates how place-based analytics can play a crucial role in generating a collective response that mobilizes community resources and expertise where and when needed.

Organization

To inform community stakeholders and develop common strategies, NPSC organizes community meetings every 60 days. To attend these meetings, participants must register and receive an agenda beforehand to be prepared to participate in the meeting's discussion. These structured one-hour events begin with a discussion on local crime trends, changes in the spatio-temporal distribution of crime (i.e., where crime concentrates and at what times of the day), and multiple RTM analyses (i.e., diagnostics of why crime concentrates in different places) for various priority crime types in different areas of the city. A discussion follows the presentation of each crime problem analysis (e.g., aggravated assaults concentrate during nighttime hours near liquor store locations) to discuss potential solutions, programs, or strategies to be implemented. In these open forum meetings, data drives a conversation that engages community participants to develop responses to a variety of crime problems.

These meetings also present an opportunity for community organizations to discuss policing options and for the local police department to obtain feedback

directly from community representatives. At NPSC meetings, we have witnessed several discussions among police commanders and community members over alternatives to existing police strategies intended to mitigate pressing crime problems. The following example illustrates the importance of multi-stakeholder collaboration, particularly when it comes to strengthening police–community relations. In a recent NPSC meeting, a member of the Newark Police Department (NPD) shared the department's response to the increase in auto theft incidents due to people leaving their cars running unattended. According to a police spokesperson, the NPD had been enforcing the city's idling laws[2] on all drivers observed leaving their vehicles running unattended. In practice, this meant that potential victims (of auto theft) would be fined for the environmental impact of leaving their cars idling in hopes that these drivers will amend their risky behavior in the future. Several community representatives criticized this approach for being excessively punitive and asked the police to reconsider their strategy. Instead, they claimed, a community-led campaign could increase awareness on the risks of car idling. Also, involving the community in this effort would help reduce potential conflicts between police and individuals leaving their cars running unattended. Later in this chapter we discuss how NPSC's partners engaged in a DICE strategy directed at reducing auto theft incidents in Newark.

      The NPD has claimed that NPSC meetings have helped them learn what they are doing well and what needs improvement. As noted by a high-ranking member of the department, "these meetings are very different from other community meetings."

A realization that comes from the fact that traditional community policing meetings are not data-informed, leading to a conversation filled with opinions over myriad problems that can be difficult to address (e.g., social issues, quality of life issues, etc.). In his observation of community meetings in Chicago, Skogan (2006b) found that residents will stop coming to community meetings if they feel that the police are not responding to their concerns. NPSC offers an alternative to traditional community policing practices by engaging community stakeholders in a data-informed discussion of crime problems that set a common agenda and shared expectations for solutions to these problems. The attendance to NPSC meetings has increased, meeting after meeting, since this initiative was established. Between January 2019 and January 2020, the number of participants at these meetings tripled to over 40 community organizations[3] represented at each meeting.

One of the main challenges observed at the NPSC is the difficulties in tracking community-based organizations' strategies and programs that result from the use of data and analytics shared at the meetings. Community-based organizations are loosely organized as compared to police departments that operate under a unique command. Also, most community-based organizations focus their resources on a specific area of Newark, except for larger organizations delivering services throughout the city. All community-based organizations receive equal access to data and analytics, including access to map visualizations on Google Earth and other data updates informing their service delivery efforts. The extent to which this information is utilized as a part of

these organizations' decision-making processes can be challenging to measure regularly. To learn from community-based organizations and other local stakeholders' unique experiences, NPSC conducts yearly surveys to better understand the influence that data and analytics have on their programs, activities, and strategies. This organizational structure presents, nonetheless, an opportunity for community stakeholders to operate in a decentralized fashion while increasing the impacts of their individual programs throughout the city.

DICE case study: Reducing motor vehicle theft

The City of Newark experienced a steady increase in the number of motor vehicle thefts (MVTs) over the last couple years. In 2019 alone, over 22 percent of all MVTs were associated with individuals leaving their cars running unattended. As noted by Newark's Public Safety Director, Anthony Ambrose, "warming up an unattended vehicle with keys in the ignition is an invitation for thieves to steal your car." The NPD warned the public on repeated occasions the risks associated with car idling, a situational enabler that, during the winter months, accounts for a significant number of all motor vehicle thefts occurring in the city of Newark. In a recent interview, Ambrose stated that "some 300 cars were taken with the engine running in 2019. At a minimum of 2 hours per officer, that's 600 hours working on people leaving their keys in the car when they (the police) could be working on more productive policing." As previously discussed, police tend to dedicate a significant amount of their time and

resources to address contextual problems that are not strictly connected to policing—a reality that affects police productivity and reduces their capacity to focus on other issues.

The Newark Public Safety Collaborative, through its partnership with the Newark Police Department and other community-based organizations, facilitated a campaign to reduce MVTs in the city of Newark. To support this community-led effort, NPSC researchers reviewed the extant literature on MVT victimization (see Kinney et al., 2008; Hollinger & Dabney, 1999; Kennedy et al., 2015; Piza et al., 2017; Piza & Carter, 2018) and analyzed the spatio-temporal correlates of MVTs associated with cars left running in the city of Newark. As suggested by Brantingham and Brantingham (1995), crime is a relatively rare event concentrated in and around crime attractors and generators. Past research has found that locations like ATMs and banks (Piza & Carter, 2018), multifamily housing and foreclosures (Kennedy et al., 2015), changes in land uses (Kinney et al., 2008), and shopping centers (Hollinger & Dabney, 1999) are spatially associated with an increased risk of auto theft victimization. To our knowledge, no prior studies have analyzed the environmental attractors of MVT due to cars left running unattended.

First, NPSC analysts used RTM to diagnose the spatial distribution of high-risk locations for motor vehicle theft due to car idling (see Figure 13.1). To conduct these analyses, NPSC analysts utilized various datasets from local government, police, the fire department, Google Maps, and InfoGroup data sources. All crime data

for auto theft incidents were obtained directly from the Newark Police Department COMSTAT unit, which offers NPSC analysts access to real-time crime data. Then, a total of 39 potential crime attractors were reviewed by NPSC analysts and ground-truthed for accuracy before being utilized as potential "risk factor" inputs for RTM, including abandoned Buildings (Xu & Griffiths, 2017), parks (Groff & McCord, 2012), schools (Roncek & Faggiani, 1985), parking lots (Suresh & Tewksbury, 2013), gas stations (Bernasco & Block, 2011), ATMs (Holt & Spencer, 2005), clubs and bars (Sypion-Dutkowska & Leitner, 2017), public housing (Griffiths & Tita, 2009), liquor stores (Gorman et al., 2001), retail stores (McCord et al., 2007), sports facilities (Eck et al., 2007), vacant lots (Kinney et al., 2008), hotels (Sypion-Dutkowska & Leitner, 2017), and trains and light rail stations (Cozens et al., 2004).

High Risk Locations for Motor Vehicle Theft Due to Car Idling
Newark, NJ
(Aug 2019 - Aug 2020)

Legend
Newark
Target Areas
Newark Streets

0   1   2 Miles

Figure 13.1: RTM map for high-risk areas for motor vehicle theft

All data inputs were analyzed using RTMDx, a software product developed by the Rutgers Center on Public Security (Caplan & Kennedy, 2013) that automatizes the steps of RTM. This software operationalizes the spatial influence of risk factors, selecting/validating the risks factors found to be associated with the outcome event, weighting the risk factors with one another, and producing final risk terrain maps with tabular information pertaining to all statistically significant risk factors (Caplan et al., 2012; Caplan et al., 2015; Garnier, Caplan, & Kennedy, 2018).

As per the results of this analysis produced by the NPSC, the following set of locations were found with RTM to present varying degrees of vulnerability towards an increase in motor vehicle theft incidents: convenience stores, gas stations, vacant lots, and liquor stores. Not surprisingly, these locations represent active activity nodes (Brantingham & Brantingham, 1993) where people tend to transit, thus increasing victimization opportunities. NPSC analysts further enhanced their analysis by integrating past exposure to MVT via kernel density maps to the data obtained with RTM for environmental vulnerability (see Caplan et al., 2020). The resulting analysis offered a depiction of all micro-level places that were expected to present a persistent or emergent high-risk for auto theft victimization due to car idling.

Upon visually inspecting the highest-risk locations identified by NPSC analysts (see Figure 13.2), a clear pattern emerged showing parking locations in close proximity to multiple retail places as the predominant spatial configuration associated with these incidents. Over 20 locations were identified citywide as being at the highest risk for auto theft victimization due to car idling. This information and its accompanying analytical outputs were then shared at NPSC's community stakeholders meeting. At the meeting, NPSC partner organizations discussed potential risk narratives that could explain why MVTs tend to occur near these specific clusters. For example, a community representative pointed at people leaving their cars running to keep their vehicles warm, thinking that there is no risk of being victimized if they grab something quickly at a nearby store, and perhaps failing to recognize motivated

offenders loitering at nearby vacant lots. Upon their return, the car will be gone. It was then agreed by the group that increasing awareness of the various risks associated with car idling could be an effective strategy to reduce this cause of MVT.
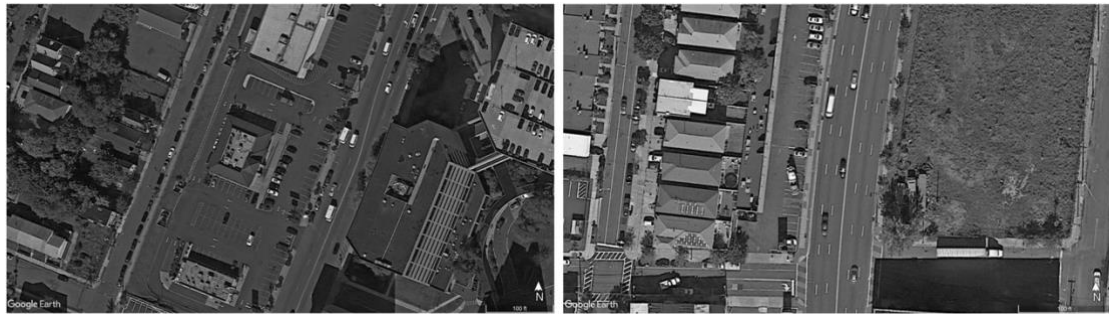

Figure 13.2: Satellite images representing two risky locations for motor vehicle theft

The proposed community intervention was a poster competition that engages community organizations in increasing awareness of the risks associated with leaving cars running unattended, and which invites community members to have a vested interest in the educational campaign and subsequent outcome. The winning poster (see Figure 13.3) will be shared by community organizations at specific locations presenting an increased risk for auto theft victimization. This strategy will consist of conducting community-led business visits to retail stores to raise awareness of the risks associated with idling and to disseminate flyers at parking lot locations in designated areas. At the time of writing this chapter, the NPSC is deploying this crime reduction campaign in Newark in cooperation with six community-based organizations and the NPD.
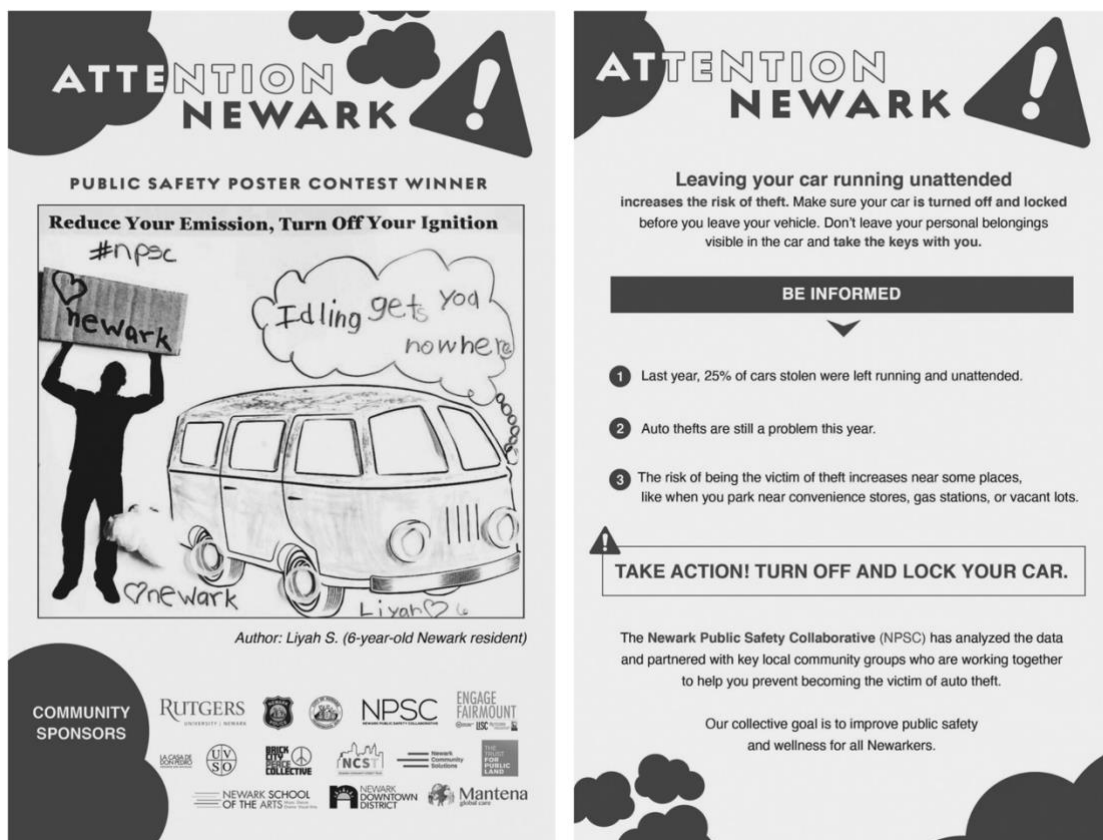
Figure 13.3: Flyers distributed at high-risk locations for motor vehicle theft

Discussion and conclusion

This chapter discussed some of the limitations of traditional community policing efforts focusing on civic engagement in public safety. Historically, collaborations between the police and the community have relied on police-centric responses to crime problems that limited community groups' abilities to participate directly in these efforts. To create a sustainable working relationship between the community

and the police requires establishing a true partnership that equally enables all participants to analyze problems, develop responses, and assess the success of problem-solving efforts. A successful collaboration can be achieved by engaging in structured data-informed conversations leading to attainable goals utilizing existing local resources. Developing these strategies requires access to accurate data and trusted analytics that inform the decision-making process needed to mobilize resources where needed the most.

Through DICE, local stakeholders can collaboratively engage in problem-solving activities that yield realistic programs and strategies directed at improving and sustaining public safety. Under DICE, community organizations receive equal access to data and analytics to empower them to maximize their own resources and become co-producers of public safety (Percy, 1987). By democratizing access to data and analytics, community groups can fully engage in problem-solving activities in effective ways. Collectively, local stakeholders can pool their resources and expertise toward the common objective of producing community safety and wellness.

Recent calls to reimagine policing has urged public officials to seek new alternatives to existing practices. Our discussion on strengthening police–community partnerships through data-informed engagement offers an opportunity for reform that strengthens community trust. To establish a successful DICE platform in public safety requires a strong commitment by local government officials and private organizations ready to offer all support and endorsements needed to sustain these efforts over time.

A transformation has already begun across the United States, with cities seeking ways to divert police funding towards community-led public safety programs (Gillers & Fuller, 2020). The resulting strategies and their impacts on crime prevention will depend on the ability of local government officials, police, and other community organizations to work collectively towards the common goal of delivering public safety.

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Notes

[1] Community groups vary in size and capacity. A small CBO can be defined as a

single mission organization with a limited scope of service. At the same time,

a large community agency enjoys access to more organizational capacity and

delivers numerous services.

[2] https://www.nbcnewyork.com/news/local/newark-imposes-hefty-fines-for-leaving-

cars-idling_new-york/2191873/

[3] https://newarkcollaborative.org/community-partners