GEORGE MASON UNIVERSITY
Center for Evidence-Based Crime Policy
Department of Criminology, Law & Society

Rainier Beach: A Beautiful Safe Place for Youth

Final Evaluation Report

Charlotte Gill, PhD
Zoe Vitter, MS
David Weisburd, PhD

Report prepared for the Bureau of Justice Assistance and City of Seattle

September 30, 2016

Award Number: 2012-AJ-BX-0006

The Center for Evidence-Based Crime Policy (CEBCP) in the Department of Criminology, Law and Society at George Mason University seeks to make scientific research a key component in decisions about crime and justice policies. The CEBCP carries out this mission by advancing rigorous studies in criminal justice and criminology through research-practice collaborations, and proactively serving as an informational and translational link to practitioners and the policy community. Learn more about our work at http://cebcp.org and about the Department of Criminology, Law and Society at http://cls.gmu.edu.

Charlotte Gill is Deputy Director of the Center for Evidence-Based Crime Policy and Assistant Professor in the Department of Criminology, Law and Society at George Mason University.

Zoe Vitter is a Research Associate in the Center for Evidence-Based Crime Policy at George Mason University.

David Weisburd is Executive Director of the Center for Evidence-Based Crime Policy and Distinguished Professor of Criminology, Law and Society at George Mason University.

This research was funded by Byrne Criminal Justice Innovation grant number 2012-AJ-BX-0006 from the Bureau of Justice Assistance and additional funding from the City of Seattle. The opinions, findings, and conclusions or recommendations expressed in this report are those of the authors and do not necessarily reflect those of the U.S. Department of Justice, Bureau of Justice Assistance, or the City of Seattle.

Contents

List of Tables

List of Figures

Summary of Findings

What is Rainier Beach: A Beautiful Safe Place for Youth?

Rainier Beach: A Beautiful Safe Place for Youth (ABSPY) is an innovative community-led, place-based violence prevention initiative. The goal of the program is to reduce youth victimization and crime in the Rainier Beach neighborhood. The program is named for the vision set out by the Rainier Beach community in its Neighborhood Plan Update, which is to make Rainier Beach a Beautiful Safe Place. ABSPY is happening in five small groups of street blocks in the neighborhood—"hot spots"—where about half of all youth crime incidents in Rainier Beach happened in 2012. The five hot spots are Rose Street, Rainier and Henderson, Rainier Beach Light Rail Station, Lake Washington, and Our Safe Way.

Project Background

ABSPY is based on a number of research studies, including one from Seattle by David Weisburd and his colleagues, showing that about half of all crime in cities comes from a very small number—typically about 5 percent—of street blocks. Crime involving young people is even more likely to come from a small number of places because youth typically spend most of their time in specific places like schools, parks, and other public spaces, so youth crime is highest in these types of places. Research shows that police efforts to reduce crime at hot spots through crackdowns and arrests are effective at reducing crime. However, arrest and prosecution can increase the chance of reoffending among high-risk youth. Because of this, ABSPY focuses on non-arrest strategies to reduce crime, such as building community leadership and capacity to help solve problems and addressing environmental risk factors for crime to promote community safety.

Project Leadership and Support

ABSPY started as a result of a $1 million grant in 2012 from the Byrne Criminal Justice Innovation Program, an initiative of the U.S. Department of Justice's Bureau of Justice Assistance. The Byrne Criminal Justice Innovation Program supports partnerships between cities, communities, and researchers to develop community-led, place-based, data-driven problem solving efforts. ABSPY is advised by a Core Team consisting of representatives from the City of Seattle, the Seattle Neighborhood Group, Seattle Police Department, the Boys and Girls Club of King County, and the Rainier Beach Action Coalition. However, what makes ABSPY unique is that the Rainier Beach community itself has taken the lead in developing evidence-informed strategies to address the root causes of youth crime in the neighborhood.

Community-Led Problem Solving

The heart of the ABSPY approach was the development of the Community Task Force (CTF), a team of over 100 community members who reflect the diversity of the Rainier Beach neighborhood. With the support of the City of Seattle's Public Outreach and Engagement Liaisons, this team was recruited directly from the five hot spots and consisted of residents, business owners, employees, students, and others with a connection to those places. The ABSPY Core Team worked with the Community Anti-Drug Coalitions of America (CADCA) to develop a one-day training session in October 2013, where the CTF learned a systematic community problem-solving framework from the field of public health to identify solutions to crime problems and risk factors using local data, community experience, and research evidence. The training was followed by a series of six workshops in which the CTF divided into five teams—one for each hot spot—and developed a set of related interventions tailored to the unique conditions of each hot spots. These interventions focused on

four key areas:

- increasing supervision and providing structure for youth
- changing the physical environment
- changing policies and rules
- building collective efficacy ("it takes a village").

Through the CTF workshops community members were asked to "tell the story" of youth crime at each location by describing the relationship between problems and identified risk factors at each place, considering desired outcomes, proposing solutions informed by research evidence, and assessing the feasibility of each approach. When the workshops were complete, the proposed interventions were presented to the Rainier Beach community at an interactive event called "The Gathering."

Interventions

The work of the Core Team and CTF led to the development of an implementation plan that directly addressed the risk factors for youth crime identified at the five hot spots and built on the expertise of a range of city and community partners. Each proposed intervention in the plan addressed one or more of the four focus areas described above, complemented and built upon the other interventions, and was designed to be implemented at either some or all of the hot spots, depending on the specific conditions at each location.

Many of the proposed interventions focused on engaging community members in Rainier Beach to break down barriers between neighbors and build relationships and problem-solving capacity. These ideas came from CTF findings that some community members were afraid to interact with each other, and particularly with young people. Starting in the summer of 2014, a number of **Corner Greeter** events were held in the community, where stations offering refreshments and fun activities were set up in each hot spot to engage the community and "activate" places that were previously considered to be unsafe. A number of other activities and events were held in the community during the project period, many of which were planned by youth with coordination from grass roots community organizations such as Rainier Beach Action Coalition. The goal of these neighbor and youth engagement activities was to reduce crime by "rebranding" the hot spots as positive places and developing a stake in the community for young people.

Small, locally owned businesses are central to Rainier Beach. Another set of interventions focused on **business engagement**. Coordinated by Seattle Neighborhood Group with support from the Rainier Beach Merchants Association, Seattle Police Department, and local community and economic development organizations, the goal of business engagement was to learn about the concerns facing local businesses, build relationships between businesses and with the police, and increase business owners' ability to prevent and report crime. **Crime Prevention Through Environmental Design (CPTED)** interventions and resources were provided to businesses to improve design, layout, and place management.

The Rainier Beach campus at Rainier and Henderson, where four schools are located, is a hub for the community. ABSPY brought together key stakeholders to form a **Rainier Beach Campus Safety Team**, through which the City and Seattle Public Schools collaborated with community partners to develop ongoing ideas for improving safety, such as staggering school release times to ensure

large crowds of young people could not converge at the hot spots. A key focus of interventions on the Rainier Beach Campus was the **Safe Passage** program, led by the Boys and Girls Club of King County. The Safe Passage team provided guardianship, supervision, and encouragement to young people as they left school. Dressed in bright blue shirts printed with "Be Safe," the team acted as visible supportive adults and role models.

Evaluation Findings

The Center for Evidence-Based Crime Policy at George Mason University has provided research and evaluation support throughout the project. To assess the effectiveness of the program, we tracked calls for police service and reported crime incidents in the five hot spots from September 2011 to August 2016. We also matched each hot spot with a comparison hot spot—a similar location elsewhere in Seattle Police Department's South Precinct—and assessed crime rates in the Rainier Beach neighborhood overall compared to trends in the South Precinct. We also conducted two community surveys in the hot spots and comparison areas—one in the summer of 2014 before the interventions began and a follow-up in the summer of 2016.

Our findings show that:

- The hot spots have become less "hot" over time.
- Crime in the South Precinct declined overall, and at a greater rate than the rest of the city.
- The hot spots saw greater declines in serious violent crime than the overall neighborhood or the South Precinct.
- In some of the hot spots calls for service, police activity, and reported incidents increased. This is not necessarily a cause for concern—it could indicate that ABSPY met its goals of increased community engagement and trust in the police.
- The number of people surveyed in the ABSPY hot spots who believed that crime had gone down in the past year increased in the 2016 survey.
- ABSPY is associated with modest but promising improvements in people's perceptions of collective efficacy and disorder, and their impressions of the police.

While we did not find statistically significant reductions in crime overall, note that full implementation of the interventions did not get under way until June 2016 due to the complexities of launching innovative, community-based strategies. It may take more time to see a crime reduction effect. For example, it took three years for Communities That Care, a well-known evidence-based community problem-solving framework, to show statistically significant evaluation results.

Sustaining the Effort

Changing places and communities is a long-term effort. Our evaluation results are a promising start, particularly the level of community engagement in the problem-solving process and during implementation and the framework it has provided for coordination of ABSPY intervention activities with other neighborhood stakeholders, such as the business community and schools. There is more work to do to make sure Rainier Beach continues to be A Beautiful Safe Place for Youth. Efforts to engage the community, such as the Corner Greeters initiative, business engagement, and Safe Passage are still under way at the hot spots and several large scale CPTED streetscape improvements leveraged through public resources will occur in early 2017. ABSPY has been successful in building capacity for positive change, and as a result the community and Core Team came together in 2015 to successfully obtain support from the City of Seattle for 2016. The City has now fully

funded ABPSY through 2018. ABSPY has also been able to continue through in-kind donations and matches from many of the organizations involved. And our initial success has opened up new opportunities for related funding and research, such as a new National Institute of Justice grant of $3.8 million to enhance Positive Behavioral Interventions and Supports and restorative justice on the Rainier Beach campus and the wider community. We have also worked with Seattle Police Department to build their capacity for identifying hot spots and working with the community to address problems. ABSPY is becoming well established in the Rainier Beach community and the team will be tracking outcomes and benefits into the future.

1. The Research Basis for ABSPY

Crime is not evenly spread across cities or neighborhoods. In most cities, a small number of "hot spots"—micro-places such as single addresses, street blocks or segments,[1] or small clusters of blocks—tend to have greater than average numbers of crime and victimization. A growing body of research from the United States and around the world indicates that about half of all crime incidents or calls for police service recorded in a city may be concentrated at a very small number of hot spots. For example, studies in Seattle, Minneapolis, Vancouver (Canada), and Tel Aviv, among other locations, have found that 50 percent of crime in those cities occurred at just 3 to 6 percent of addresses or blocks (Curman, Andresen, & Brantingham, 2015; Pierce, Spaar, & Briggs, 1988; Sherman, Gartin, & Buerger, 1989; Weisburd, 2015; Weisburd & Amram, 2014; Weisburd et al., 2004; Weisburd & Green, 1995; Weisburd, Groff, & Yang, 2012). These studies also indicate that this degree of concentration is relatively stable over time, even during periods of sustained declining crime in the city overall (Curman et al., 2015; Weisburd, 2015; Weisburd & Amram, 2014; Weisburd et al., 2004).

Despite the strength of this evidence for overall crime, few studies have examined its applicability to incidents involving young people.[2] Weisburd, Morris, and Groff (2009) have conducted the only study to date that specifically focuses on juvenile crime concentrations, based on data from Seattle. They found that one-third of all arrests of juveniles in the city occurred at just 86 of more than 26,000 street segments in the 14 years from 1989 to 2004. In other words, juvenile crime appears to be even more highly concentrated at places than crime in general.

Environmental theories of criminology provide some insights into why certain places have higher crime rates than others, and why these differences appear to persist over time. People's daily routine activities, which are partly determined by the types of places they frequent, shape opportunities for crime and affect people's risk of victimization or decisions whether or not to commit crime (e.g. Cohen & Felson, 1979; Felson, 1987; Felson & Boba, 2010). While these ideas apply regardless of the person's age, they suggest that the specific types of activities engaged in by young people influence the types of places in which they are likely to spend time and commit crime (Felson, 2006).

For example, juveniles are required to be in school at certain times, and juvenile offending tends to cluster around schools during the times when students are arriving or leaving (Gottfredson, Gottfredson, & Weisman, 2001; Roman, 2002, 2005). Young people's routes of travel to and from school tend to be more predictable and specifically defined than the commutes of adults and can produce opportunities for crime when potential victims and offenders cross paths (Brantingham & Brantingham, 1995). Juveniles, to a much greater extent than adults, are also subject to restrictions on where they congregate—they cannot go into bars, or they may be subject to a curfew during certain times of the day. These factors also determine patterns of juvenile offending at particular places and times—a bar district at night is unlikely to experience a high rate of juvenile crime. The relationship between crime and these juvenile and youth "activity spaces" is supported by the study by Weisburd et al. (2009), who found that the Seattle street segments with the highest numbers of juvenile arrests were the types of places where young people tend to hang out without supervision or structured activity—shopping malls, outside schools, and other public spaces—while streets with concentrations of private homes or bars and nightclubs had the low-

[1] Street segments are defined as the two block faces between two intersections (e.g. Weisburd, Bushway, Lum, & Yang, 2004).

[2] In this report we define youthful offenders as individuals aged 25 and under, unless otherwise stated. While the juvenile justice system focuses on youth under 18, there is increasing recognition that the 18-25 age group should also be considered youthful offenders, given that the brain is not fully developed until around age 25, impacting decision-making and risky behavior (e.g. Steinberg, 2008).

est rates of juvenile crime. These findings fit with research by Osgood, Wilson, O'Malley, Bachman, and Johnston (1996) showing that unstructured, unsupervised socializing is linked to higher rates of juvenile delinquency and violence.

The evidence for high levels of crime concentration at hot spots indicates that interventions can be effectively targeted in just a few small areas. For example, interventions that focus police resources at micro places are effective (e.g. Braga & Bond, 2008; Braga, Papachristos, & Hureau, 2014; Braga et al., 1999; Groff et al., 2015; Lum, Koper, & Telep, 2011; Ratcliffe, Taniguchi, Groff, & Wood, 2011; Sherman & Weisburd, 1995; Skogan & Frydl, 2004; Telep, Mitchell, & Weisburd, 2014; Weisburd & Eck, 2004; Weisburd & Green, 1995). These approaches, which include preventive vehicle or foot patrol, crackdowns, problem-oriented policing, increasing place management, and focusing on high-risk offenders at places, also appeal to police leaders because they allow the police to deal with a large proportion of crime by tackling a smaller number of places compared to traditional beat patrol, thus increasing the efficiency as well as the effectiveness of policing (Weisburd & Telep, 2010). Furthermore, there is little evidence that focusing police efforts at micro places displaces crime to neighboring street segments. Conversely, studies suggest that a diffusion of crime control benefits to surrounding streets is more likely (e.g. Bowers, Johnson, Guerette, Summers, & Poynton, 2011; Braga et al., 2014; Weisburd et al., 2006).

However, very little of this evidence has examined the application of these approaches to places where there is a high concentration of juvenile or youth crime. Given the specific characteristics of these places and the types of activities youth engage in there, different policing strategies may be warranted. Furthermore, police-led crime prevention efforts, particularly deterrence-based hot spots policing that employs crackdowns and "busts" to clear offenders from high-crime places, may not be appropriate for dealing with crime involving young people. Juveniles who are arrested and processed through the formal juvenile justice system—especially those involved in less serious crimes—are more likely to reoffend than their counterparts who are diverted to needed services (Petrosino, Turpin-Petrosino, & Guckenburg, 2010). Arrest, court adjudication, and incarceration may stigmatize youth and lead to exclusion from school and positive peer group influences as well as increased scrutiny from the justice system. Youth may continue their delinquency when their social ties to positive institutions such as school and the family are weakened (Lowenkamp & Latessa, 2004; Lundman, 1993; Petrosino et al., 2010; Shelden, 1999). However, there is evidence that community-based interventions that focus on supervision, problem-solving, and reintegration are effective for young people (e.g. Braithwaite, 1989; Gill, 2016; Greenwood, 2008; Lipsey, 2009).

While the police can (and should, in our opinion) still have a stake in community-based crime prevention, the premise of the *Rainier Beach: A Beautiful Safe Place for Youth* initiative is that community members and groups can take the lead in providing effective, evidence-based prevention strategies based on theories of juvenile activity spaces and hot spots. Given that youth crime hot spots tend to arise where unstructured, unsupervised socializing is common (Weisburd et al., 2009), the community can play a key role in crime control by providing guardianship, creating supervised, pro-social socializing opportunities for youth, and getting involved in the provision of activities such as education, employment, and volunteer service opportunities. Interventions involving community partnerships, multi-agency working groups, and civil remedies rather than criminal penalties may be more conducive to community reintegration (e.g. Braithwaite, 1989; Lum et al., 2011; Mazerolle & Ransley, 2005; Taxman & McEwen, 1997; Weisburd & Eck, 2004) and take advantage of the informal social control—the ability of communities to regulate their residents—inherent at places, which is often overlooked in police-led interventions (Weisburd, Davis, & Gill, 2015; see also Bursik Jr., 1988; Kubrin & Weitzer, 2003; Sampson & Groves, 1989). Approaches to crime prevention that involve the community in taking ownership of its own space, looking out for each oth-

ers' children, and so on can help to build collective efficacy, or "the willingness [of residents] to intervene for the common good" (Sampson, Raudenbush, & Earls, 1997, p. 919), and social ties or cohesion among community members. Weisburd et al. (2012) find that levels of collective efficacy, social disorganization (the lack of social cohesion), and informal social control vary across street segments in the same way as crime, and that the level of collective efficacy is a key social factor in explaining whether or not a place becomes a hot spot.

2. The ABSPY Model

2.1. Program History and Goals

Rainier Beach: A Beautiful Safe Place for Youth (ABSPY) was developed as a collaboration between community stakeholders, local government, grass-roots community organizations, and researchers as a program that would build on the theories and research described in the previous section to deliver community-led, place-based, data-driven and non-arrest based interventions to hot spots of juvenile and youth crime in the Rainier Beach neighborhood of Seattle. ABSPY was initially funded by a 3-year, $1 million Byrne Criminal Justice Innovation (BCJI) grant from the Bureau of Justice Assistance, U.S. Department of Justice, which was awarded in 2012. BCJI funds collaborations between researchers, practitioners, and community members to develop community-led, place-based, data-driven approaches to reducing crime and improving public safety, and therefore fit extremely well with the vision for ABSPY.

The project planning phase ran from January to September 2013, and the BCJI implementation phase began in October 2013 and continued through September 2016 (with a one-year, no-cost extension). Beginning in January 2016, implementation was also supported by the City of Seattle through its Human Services Department. Implementation funding from the City is reviewed on an annual basis, and ABSPY is currently funded through 2018 (more details on sustainability are provided below).

ABSPY was designed to build on two existing community processes—the 2012 Rainier Beach Neighborhood Plan Update (RBNPU) and the Seattle Youth Violence Prevention Initiative (SYVPI), which at the time the grant began was a program within the City of Seattle's Department of Neighborhoods—and the city's then developing research partnership with the Center for Evidence-Based Crime Policy (CEBCP) at George Mason University.

Rainier Beach Neighborhood Plan Update. Since the late 1990s the City of Seattle has supported a neighborhood planning process in a number of communities across the city. The goal of this process is for community members and local organizations to come together to develop a vision and strategic plan for improving the neighborhood. In 2011 participating neighborhoods, including Rainier Beach, undertook an update of the plan. Rainier Beach's plan, which is implemented by the Rainier Beach Action Coalition (RBAC), a grass-roots community organization and key partner in ABSPY, aligns closely with BCJI. The community priorities set out in the RBNPU center around addressing the root causes of violence through community-led approaches and improving community health through changes to the physical environment, economic development, community-building, and providing activities and supervision for youth, and the plan explicitly calls for a hot spots approach. The ultimate goal of RBNPU is to rebrand the neighborhood as "A Beautiful Safe Place." This was the inspiration for branding the youth-focused efforts of ABSPY.

The Seattle Youth Violence Prevention Initiative. SYVPI was a multi-disciplinary initiative of the City of Seattle, which involved the Departments of Neighborhoods, Human Services, and Parks; the Seattle Police Department (SPD), and local public and nonprofit partners such as the Boys and Girls Clubs of King County, Seattle Public Schools, and the juvenile court. SYVPI was created in 2008 by the Mayor's Office in response to the murders of five teenagers in the city that year. The Initiative focused on outreach and services to at-risk youth, connecting evidence-based prevention and intervention strategies with innovative grassroots services. SYVPI focused on three "neighborhood networks" within Seattle that were believed to be most affected by youth violence:

- Central, which fully overlaps with SPD's East Precinct and also contains part of the West Precinct (excluding downtown Seattle) and the northwest portion of the South Precinct;
- Southwest, which aligns with SPD's Southwest Precinct; and
- Southeast, where Rainier Beach neighborhood is located, which aligns with most of the South Precinct and the stadium/industrial areas on the edge of the West Precinct.

SYVPI was thus well-placed to serve as the fiscal agent for the BCJI grant, given its interagency team and existing links with the Rainier Beach neighborhood and other project partners.

The Center for Evidence-Based Crime Policy. CEBCP is a research center within the Department of Criminology, Law and Society at George Mason University. The mission of CEBCP is to make scientific research a key component in decisions about crime and justice policy, and to promote collaboration and research translation with policymakers, practitioners, and community members. The CEBCP's research focuses specifically on place-based crime prevention, policing, and community collaboration. Prior to joining George Mason University, CEBCP's Executive Director Professor David Weisburd led extensive research on hot spots and patterns of crime at place in Seattle, which forms the core of much of the empirical research basis for place-based approaches (e.g. Weisburd, 2015; Weisburd et al., 2004; Weisburd et al., 2012; Weisburd et al., 2009). These studies came to the attention of Seattle's Office of City Auditor in 2010 while that office was conducting a research report into best practices for tackling crime and disorder in the city's hot spots. The Office of City Auditor, along with Seattle Police Department and other city government agencies, then began developing a research partnership with CEBCP to conduct applied research into place-based crime prevention strategies.

2.2. Project Team

A unique feature of ABSPY is that the Rainier Beach community itself has been at the forefront of identifying place-based risk factors for youth crime at hot spots within the neighborhood and developing evidence-informed strategies to address them. Efforts to engage and advise community members in these activities are led by a "Core Team"—a robust cross-sector partnership that provides expertise, strategic planning, and implementation support in order to empower residents to build their own capacity for crime prevention. In addition to SYVPI and CEBCP, the Core Team comprises:

Seattle Neighborhood Group. SNG is a non-profit organization with expertise in community engagement and crime prevention. The mission of SNG is to prevent crime and build community through partnerships with residents, businesses, law enforcement, and other organizations, Crime Prevention Through Environmental Design (CPTED) strategies, training, and community organizing. SNG provides overall coordination and project management for the planning and implementation of ABSPY, as well as implementing crime prevention strategies such as CPTED, contracting with other providers for interventions, and engaging community members in the process. We provide more specific information about the interventions and community engagement strategies used in ABSPY later in this report. SNG also manages the Public Outreach and Engagement Liaison (POEL) team, which was developed by the City of Seattle and housed within the Department of Neighborhoods. The POEL team is modeled after the Annie E. Casey Foundation's Trusted Advocate model and consists of representatives from Seattle's various linguistic, ethnic, and cultural groups who provide translation, interpretation, and facilitation to ensure that historically under-represented communities are engaged in civic processes. The POEL team was

central to the community outreach and engagement process for ABSPY. Rainier Beach is a highly diverse community and over 160 languages are spoken in the Rainier Valley, so the POELs played a crucial role in ensuring that the community stakeholders who were involved in ABSPY were truly representative of those who live and work in the community.

Rainier Beach Action Coalition. RBAC is a local alliance of Rainier Beach residents, community organizations, businesses, agencies, and institutions that collaborate to build the neighborhood's capacity to improve quality of life and the status of local youth and families. RBAC oversees the RBNPU and works to ensure that ABSPY and RBNPU are aligned and supported by the community. RBAC is also involved in ABSPY interventions to activate hot spots and engage residents.

Seattle Police Department. SPD is engaged with ABSPY at both the precinct and command levels. At the precinct level, SPD officers are involved in business and community engagement intervention activities and crime analysts support data tracking efforts. At the command level, SPD's strategic crime analysis unit provides CEBCP with crime incident and calls for service data on a monthly basis for evaluation purposes and assists with other ad hoc data requests. A key part of the sustainability of ABSPY relies on SPD building its own internal capacity to conduct hot spots analysis and implement place-based policing, as we describe later in the report.

Boys and Girls Club of King County. The BGC, located at the Joel E. Smilow Clubhouse and Teen Center at Rainier Vista, is the lead implementation agency for SYVPI's Southeast neighborhood network, in which the Rainier Beach neighborhood is located. BGC is a key partner in implementing crime prevention strategies, particularly those that provide supervision and activities for youth.

City of Seattle Office of City Auditor. OCA acts as the research liaison for research-based initiatives across the city and has an established relationship with CEBCP, the research partner. OCA also has a broad overview of the activities of other City departments and facilitates contacts and collaboration between departments for implementation and planning.

Additional City Partners. Office of Economic Development; Seattle Department of Transportation; Seattle Parks and Recreation; Seattle Public Library; Seattle Public Utilities.

Additional Community Partners. Aki Kurose Middle School; Atlantic Street Family Center; Catholic Community Services Youth Tutoring Program; Dunlap Elementary School; Emerald City Bible Fellowship; Ethiopian Community Services of Seattle; Fathers and Sons Together (FAST); Feet First; HomeSite; Lake Washington Apartments; Oromo Center; Rainier Beach Campus Safety Team; Rainier Beach Community Center Advisory Committee; Rainier Beach High School; Rainier Beach Merchants Association; Rainier Beach United Methodist Church; Rainier Valley Chamber of Commerce; Rainier Valley Community Development Fund; Rainier Valley Corps; Seattle Police Foundation; Somali Community Services of Seattle; South East Effective Development (SEED); South Lake High School; South Seattle Crime Prevention Council; South Shore K-8 School; The Mission Continues (veterans service organization); United Story; Urban Impact.

2.3. The Problem Solving Process

ABSPY is unique because of its community-led approach to problem-solving around youth crime. Systematic problem solving efforts are increasingly common in crime prevention settings and can effectively

build justice system and community capacity to reduce crime. Examples include the SARA (scanning, analysis, response, assessment) model of problem-oriented policing (Goldstein, 1990; Weisburd, Telep, Hinkle, & Eck, 2010), the Communities That Care prevention science model (e.g. Hawkins, Catalano, & Arthur, 2002), and the Substance Abuse and Mental Health Services Administration's (SAMHSA) Strategic Prevention Framework. These approaches guide participants through a series of steps to examine and analyze the evidence for a problem and identify the risk factors that drive it, develop tailored strategies to address the risk factors, and engage in continuous assessment and evaluation to refine the strategies. However, the extent to which community members are involved in these processes or have opportunities to lead them varies. The ABSPY model ensured that community members were fully involved in the process of identifying the specific places and problems that needed to be addressed. The community was also at the forefront of deciding which strategies should be implemented to address the problems at each place, within a broad evidence-based framework and with facilitation and guidance from the Core Team.

During the first 9 months of the initiative (January–September 2013), the Core Team and research partners engaged in a comprehensive planning process to:

1. Identify youth crime hot spots within Rainier Beach and gather data about their characteristics and potential risk factors for crime;

2. Build a "Community Task Force" (CTF) of Rainier Beach community members and train them in the problem-solving approach; and

3. Work with the CTF to develop a set of evidence-informed interventions to address the specific risk factors for crime at the identified hot spots.

Both the training in Stage 2 and Stage 3 took place at the beginning of the implementation period once the planning phase was complete (beginning in October 2013). While we initially envisaged that all three stages would fall within the planning phase, we came to view the community outreach and engagement involved in building the CTF and working with that team to develop the interventions as an intervention in itself. The process of identifying and building community capacity to intervene and problem-solve ties closely to the concept of collective efficacy—one of the key theoretical bases for ABSPY—and the enhancement of informal social control.

2.3.1. Identifying the hot spots

CEBCP undertook a street-by-street analysis of recorded crime incidents in SPD's South Precinct, where the Rainier Beach neighborhood is located, to identify "hot spots" of incidents involving youth. Following the prior research described above, we defined a hot spot as a single street segment at which crime was disproportionately concentrated. However, the final hot spots we selected for the intervention could either be single street segments or small groups of several contiguous street segments, recognizing that crime activity could be linked across several blocks (Weisburd et al., 2009). This approach also allowed us to include incidents occurring in the intersections between blocks, which are typically excluded in street segment analyses because they cannot be attributed to a specific block.

We used police incident reports to identify hot spots rather than calls for service data because the latter do not include information about the ages of people involved. Calls for police service (which typically

include both 911 calls from the public and police-initiated activities or "on-views"—problems that police officers come across during the course of their patrol) provide a broader view of community concerns and police observations than incident reports. Incident reports are taken when an officer responds to a call and finds sufficient evidence of a crime or problem to make a record (even if nobody is arrested). These reports usually contain information, including the age, of suspects, arrestees and victims, but are limited to the information the officer has available at the time the report is made. However, using incident reports is preferable to arrest records, which place the focus on individuals rather than places, especially in the case of youth crime where officers may exercise considerable discretion in determining whether to arrest (e.g. Skogan & Frydl, 2004).

Our hot spots analysis was based on two datasets provided by SPD for 2012 for the entire city. One dataset contained details of all incidents that generated a police report in that year: offense type;[3] date, time, and day of the incident; location (including full address and X-Y coordinates); roles of people involved in the incident (arrestee, victim, suspect, subject, witness); and other pertinent information. The second dataset contained information about each person involved in an incident, and could be linked to the first dataset by unique identifying numbers for each incident and person. The person dataset contained each person's role, date of birth, demographic and physical descriptors, occupation, and the city, state, and zip code of their home residence. We calculated the individual's age at the time of the incident using the date of birth and incident date. The dataset did not allow us to identify specific individuals.

We selected incidents involving juveniles and youth up to and including age 25 as suspects, subjects, arrestees, and/or victims. We dropped any reports that were not crime or disorder-related (e.g. accidents, suicides, natural deaths), traffic-related incidents, and those that could not be linked to a specific place (e.g. DUI). We considered all offenses within incidents to provide the most accurate picture of crime at each location, but the incident, not the offense was our primary unit of analysis so we selected a single offense type to represent the report. We prioritized person, then property crimes over other offense types (for example, a report of an assault where the arrestee was also carrying illegal drugs would be counted as an assault). According to our data sharing agreement with SPD, as well as Washington state privacy laws, we were not allowed to share details of certain sensitive offense types with the community because of the specific geographic focus of our project. These offense types were: domestic incidents, arson, child abuse, suspicious circumstances, disturbances (if related to a death), weapons offenses, homicide, kidnapping, witness intimidation, rape, sexual offenses, stalking, and threats (if related to death). Other non-criminal or disorder-related issues are also non-reportable: deaths, runaways, mental health crisis, missing person, overdose, and suicide. However, we did not exclude these incidents from our hot spots identification or evaluation, as the findings are not broken out by offense type.

We geocoded the addresses of eligible incidents in ArcMap 10.2.[4] Over 99 percent of addresses were successfully matched for the entire city after removing non-addresses such as "Seattle area." We geocoded incidents by address rather than X-Y coordinates because the coordinates located incidents at the center of land parcels, making it impossible to determine whether the incident occurred on the block in front of the parcel or on an adjacent cross street. Incidents occurring at intersections comprised about 10 percent of the citywide total.

After geocoding the incidents, streets in the South Precinct were joined to the points and mapped. We

[3] Each incident report could contain multiple offenses; for example, if the police responded to a report of an assault and arrested a subject who was found to be carrying heroin, both the assault and the drug offense would be recorded within the same incident report.

[4] Full technical details of this approach are available in a separate report (Gill, Vitter, & Weisburd, 2015).

used the borders of Rainier Beach as described in the Rainier Beach Neighborhood Plan Update to determine which street segments fell within the neighborhood.[5] In the maps referenced below (Figures 1–3) we use a 5-color scheme created using the natural breaks (Jenks) method in ArcMap to assess the degree of youth-involved crime concentration at each street segment. Although the number of crimes in each category varied depending on whether we examined juvenile (under 18) or youth (age 18-25) incidents, Category 1 (green) represented street segments with no or very little crime and Category 5 (purple) represented those with the most crime. We examined street segments that fell within Rainier Beach and Categories 3, 4, or 5 to focus in on five target hot spots for intervention. We also examined street segments in those categories outside the boundaries of Rainier Beach to identify five comparison hot spots that were matched to the target hot spots (see below). We do not identify the exact locations of the comparison hot spots in this report as data collection and comparison efforts are still ongoing at the time of writing.

We used a variety of additional sources to assemble information about the hot spots. Map layers from King County and Google were included to identify land parcels, major buildings, transit lines and stops, bodies of water, streams, parks, and schools. We also used Google Street View to visualize each location and followed up with in-person site visits. We also used Census data (at the block group level) on demographics, poverty, employment, education, and number of households with juveniles as a further point of comparison between the Rainier Beach hot spots and the comparison sites (in addition to the number and types of incidents occurring there) in order to narrow down the remaining South Precinct sites to find matches. While Rainier Beach is in many ways unique, we were able to match each of the five hot spots with comparison sites that were similar in terms of crime rates, demographics, and land use characteristics (such as the presence of schools, residential and commercial properties, Light Rail stations etc.). Finally, we validated the five target hot spots in an informal focus group with the Core Team. This allowed us not only to ensure that the locations we identified matched the community's perceptions of the highest crime areas, but also to gather additional qualitative information about the places from those who were familiar with them, including historical context, land use and population, and existing revitalization efforts. Later in the process, additional data collection was undertaken by the research team, Core Team, and community partners to provide further context for intervention. These efforts included a Community Appearance Index, Crime Prevention Through Environmental Design (CPTED) assessments, focus groups with youth, and the two-wave community survey described later in this report.

Figures 1 and 2 show the results of the South Precinct hot spots mapping for juveniles and youth age 18-25 respectively.[6] The Rainier Beach neighborhood is shaded in pink. Consistent with the research on crime concentration at micro-place, the majority of incidents were concentrated on specific street segments spread around the precinct—note that most of the street segments had few to no reported incidents in 2012. We identified 21 individual or small clusters of street segments with disproportionately high numbers of incidents across the precinct. These "hot" locations tended to be near major roads, such as Rainier Avenue South and Martin Luther King Jr. Way.

Figure 3 zooms in on the hot spots in and around the Rainier Beach neighborhood. In this map, both juvenile and youth incidents are shown, with the color on the outside of the street segment representing the number of incidents involving youth and the color on the inside representing juvenile incidents. Our analysis revealed six clusters of street segments in Rainier Beach, of which we selected five according to

[5] We note that SPD uses different boundaries to identify Rainier Beach for its micro-community crime analysis approach; therefore, our analysis of crime trends in Rainier Beach does not necessarily match SPD statistics.

[6] For the remainder of this report, we use the term "juvenile" to refer to children under the age of 18 and "youth" to refer to young adults age 18-25.

our original proposal. We included more than one street segment in each hot spot to increase the number of offenses for statistical analysis and also to account for the fact that contiguous "hot" segments likely have linked crime problems. During our focus group with the Core Team we also assigned recognizable names to each hot spot that would make sense to the community. Figure 4 shows the five hot spots as they were presented to the community, and places them within the context of other geographic features and community resources in the neighborhood, including the "Rainier Beach Pearls"—locations identified in the Rainier Beach Neighborhood Plan as community hubs and targets for economic revitalization.

Location #17/A: Rose Street. The two street segments of Rainier Avenue S. immediately south of S. Kenyon Street (orange and red-orange in Figure 3 and the small orange-red segment immediately south of the intersection of Rainier Avenue S., Wolcott Avenue S., and Wabash Avenue S.

Location #18/D: Rainier & Henderson. The four segments of Rainier Avenue S. and S. Henderson Street that radiate out from the intersection between the streets (red, orange-red, and orange).

Location #20/E: The Light Rail. The four segments of S. Henderson Street and Martin Luther King Jr. Way S. that converge on the intersection (orange and yellow-orange) where the Rainier Beach Light Rail station is located.

Location #19/B: Lake Washington Apartments. The purple-red segment of Seward Park Avenue S. and the orange segment immediately north. A large apartment complex sits behind the purple-red segment, also bounded by S. Henderson Street and 52nd Avenue S. (S. Fisher Place is within the apartment complex, which is gated).

Location #21/C: Our Safe Way. The purple-red segment of Rainier Avenue S. The name is a play on the Safeway grocery store at the location and 52nd Avenue S., which appears as a street on the map but is actually a pedestrian alley known locally as Mapes Creek Walkway or "The Cut."

We produced detailed profiles of each of these hot spots for the Community Task Force training (described below), which took place in October 2013. These profiles, which contain descriptions of the physical location, history, and community resources at each hot spot and data on crime and safety for January 2012 through August 2013, can be accessed via the ABSPY website.

2.3.2. Building the Community Task Force

As previously noted, the development of the Community Task Force (CTF) was the key innovation of ABSPY and the initial stage of our intervention process. During the planning phase, Seattle Neighborhood Group (SNG) took the lead on developing an inclusive community outreach and engagement strategy to ensure not only that community members from each of the five hot spots were involved in the process, but also that those who were identified and engaged truly represented the diversity of these "micro-communities." This involved outreach to apartment complexes, places of worship, businesses and schools with whom SNG had existing contacts through its crime prevention work; asset mapping of existing and new contacts; and door-to-door visits. The POELs played a crucial role here in identifying and engaging members of their respective ethnic and cultural communities (in particular, the African American, Ethiopian, Filipino, Somali, Spanish, and Vietnamese communities).

These efforts led to the development of a CTF made up of over 100 community members, who formed the five hot spot teams that engaged in a series of problem solving workshops over the next six months (see below). One long-term member of the community who attended the initial CTF training session told us she had been to many community meetings in the neighborhood over the years, but this was the first time she felt the full cultural and ethnic diversity of the community was authentically represented. Our efforts to engage the community—particularly those members who are traditionally under-represented, including youth—did not stop at the CTF workshops and we used creative approaches beyond simply inviting people to meetings to include their voices in our problem solving activities, including police-community panels and focus groups with young people in schools and through the Rainier Valley Boys and Girls Club. Our most innovative outreach effort was a collaboration with United Story, a civic engagement organization, called *Breaking the Pane*, which provided an opportunity for community members to use art as a vehicle to express their perceptions of crime, safety, collective efficacy, and neighborhood pride by decorating panes of glass with images and words. *Breaking the Pane* consisted of a series of outdoor workshops culminating in a large Gathering event in which over 120 people—mostly youth—engaged in dialogue and enjoyed performances inspired by the art they had created. The panes of glass were then assembled to create a large, moveable installation that was displayed at both Gathering events and has also been showcased at Seattle City Hall and in local schools.

CTF activities began with a full-team, 7-hour training session developed as a collaboration between the Core Team, research partners, and our technical assistance partner, Community Anti-Drug Coalitions of America (CADCA). The curriculum was adapted from SAMHSA's Strategic Prevention Framework (see also Yang, Foster-Fishman, Collins, & Ahn, 2012) to fit the place-based approach of ABSPY and BCJI, and was designed to be culturally appropriate to the Rainier Beach community. The adapted problem solving approach encouraged community members to develop a "logic model" for each hot spot, starting with identification of the problem and culminating in a set of tailored strategies to address it:

1. **What is the problem?** The comprehensive data reports created for each hot spot were provided to participants in workbooks to provide an overview of incidents recorded by police in each hot spot. Community members were encouraged to go beyond the data, recognizing that police data only represent a snapshot of concerns among sections of the community that are more likely to call the police and may not reflect lower-level problems that contribute to fear of crime.

2. **Why is the problem occurring?** What are the "root causes" of the crime problems identified? These are not necessarily micro-place specific, but reflect underlying theories of why crime might be more likely in some communities than others (for example, poverty, unemployment, and lack of opportunities).

3. **Why here?** What are the place-based risk factors that drive the crime problem at the specific hot spots? How do the root causes of crime manifest in those places? Examples include social and environmental factors such as a lack of supervision of youth, poor lighting, physical disorder, and so on.

4. **What can we do about it?** Which evidence-informed strategies could be applied at the specific hot spots to address the place-based risk factors? This stage is described in more detail below.

5. **Why do we think it will work?** What are the mechanisms that connect the identified strategies back to the risk factors and root causes?

6. **What is the expected outcome?** What specific outcomes will be affected if the strategies are im-

plemented successfully? Examples include reductions in specific crime types, increases in collective efficacy and neighborhood capacity, reduced fear of crime, and so on.

The training session was pilot-tested with the Core Team and other project stakeholders in June 2013 and feedback from that session was used to refine the curriculum. The full CTF training was held in October 2013. The day began with introductions from the Captain of SPD's South Precinct (at the time, the Captain was Carmen Best, who went on to be promoted to Deputy Chief—she was greatly liked and respected by the Rainier Beach community), then-SYVPI Director Mariko Lockhart, and the research partners. The remainder of the training day consisted of a mixture of short presentations on the program theory, data, and problem solving process, and group exercises in which participants applied what they had learned from the presentations to each stage of the problem solving process (up to stage 3). The training session was intended as a "dry run" of the process rather than a definitive problem analysis; each stage of the process was covered in detail in a series of follow-up workshops as described below.

In addition to the diversity of the CTF, the fact that over 100 members attended a full-day training session on a Saturday was further testimony to both the success of our outreach efforts and the willingness of the community to get involved. This level of involvement can be partially attributed to the amount of collective efficacy already present in the community. We introduced them to this concept, which we described as "neighborliness" and defined as the principle of "it takes a village…", during the training session and it resonated strongly with many of the attendees. In addition, several practical factors increased attendance. The POELs again played a vital role during the training, especially those who worked with non-English speaking community members. We organized tables for different non-English speaking groups in addition to hot spot-specific tables, at which the POELs provided simultaneous interpretation and group activity facilitation in six different languages for the duration of the training session. The session was held at South Shore K-8 School, which is at the heart of Rainier Beach and within the Rainier & Henderson hot spot, so it was easily accessible for most community members. While giving up a Saturday was still a big ask for the community members, it was easier than trying to schedule the training on a weekday when many people would be at work, or spreading it out across a series of weekday evenings. However, we also ensured that the training was recorded (by a local multimedia company) for those who were interested but could not attend, and provided copies of all training materials on the ABSPY website. Finally, SYVPI tapped non-federal resources to provide food from local restaurants and free child care within the school building so that families with children could attend and participate.

The full CTF problem solving process consisted of a series of five workshops held between December 2013 and May 2014, and a final sixth workshop in October 2014 to assess new data, including SNG's comprehensive CPTED assessments of the five hot spots and the first wave of the community survey (described below). This workshop calendar roughly corresponded to each stage of the problem solving framework (some workshops on the same topic were repeated because of scheduling challenges). Each workshop began with a team building exercise to reinforce the sense of community and collective efficacy within each hot spot group and introduce new participants. The CTF began in the first workshop by examining the SPD data as presented by the research partners in the initial community reports. The research partners attended the workshops (either in person or via video conference) to provide support and assistance as the teams attempted to make sense of the police data. From there, the CTF was asked to "tell the story" of youth crime at each hot spot, taking into account their own experiences as community members and the additional qualitative data. This allowed the CTF to develop a picture of the unique local conditions at each hot spot, placed within the cultural and historical context of the location. In subsequent workshops the CTF identified the place-based risk factors tied to the problems they had identified and developed a set of strategies within a broad framework of evidence-informed principles

(described below). In each subsequent workshop the definitions of the problem and place-based risk factors were refined to take into account updates to the SPD data provided by the research partners, and the additional data collection efforts including the youth focus groups and police-community panels. The agendas, notes, and products of each workshop are archived on the ABSPY website.

The problem solving process culminated with the final workshop at the end of May 2014, which was presented as a community event called The Gathering. This was an opportunity for the CTF to present the results of the problem-solving process to the broader community, and celebrate the move from problem solving to implementation and all the progress that had been made so far. The Gathering was attended by the Mayor of Seattle. The Gathering was followed up in December 2015 to celebrate the end of the first full year of implementation and present preliminary findings, and the CTF met on an ad hoc basis several times during the implementation period to plan for implementation and assess new data (such as the first wave of the community survey described below, which was conducted in the summer of 2014).

2.3.3. Developing the interventions

The CTF was given broad discretion in selecting interventions to address the specific risk factors for youth crime at their hot spots. However, in order to ensure that the interventions selected were in line with either evidence-based strategies or theoretically informed innovations, the research partners created a Strategies Guide that set out four broad categories within which interventions were to be developed. The Strategies Guide described the research basis for these categories (and for the overall concept of addressing crime by focusing on micro-places) in plain language and included examples relevant to the local area to inspire and guide the CTF. The four categories were as follows:

1. **Increasing supervision and providing structure for youth.** This area of intervention builds on the research cited above indicating that unsupervised, unstructured socializing among youth is linked to higher levels of youth violence in communities, and that hot spots of juvenile crime tend to be those places in which youth engage in unsupervised, unstructured activities. Strategies that increase supervision tie into routine activities theory, which posits that opportunities for crime are generated when a motivated offender and a suitable target or victim converge at places in which there is a lack of guardianship (people—or non-human guardians such as security cameras—who can protect victims and targets through their presence and watchfulness), place management (people who control activities and behavior at certain places), and/or handlers (people who influence offenders to avoid crime) (Cohen & Felson, 1979; Eck, 1994; Felson, 1986).

2. **Changing the physical environment.** Environmental approaches, including situational crime prevention and Crime Prevention Through Environmental Design (CPTED), are well-established strategies for reducing crime at places (e.g. Bowers & Johnson, 2016; Clarke, 1983, 1995; Guerette & Bowers, 2009; Welsh & Farrington, 2008; Welsh, Mudge, & Farrington, 2010). Environmental change ties into the "broken windows" theory (Wilson & Kelling, 1982), which proposes that if small examples of visible physical disorder such as graffiti, trash, discarded needles, or broken windows are not quickly addressed, more serious crime can result as potential offenders learn that community capacity to prevent problems is lacking (for example, people are afraid or unwilling to call the police). Signs of physical disorder and poor design (such as inadequate street lighting) can cause residents and visitors to feel unsafe, increasing the likelihood that they will stay inside and thus be unable to act as "eyes on the street." Again, this ties back to the routine activities theory and the protective effect of guardianship against crime. Another advantage of environmental approaches is that they

are intended to encourage all space users to look out for each other and behave positively, rather than to target specific individuals or groups.

3. **Changing policies and rules.** Changing policies and rules are related to environmental strategies, but the focus is on either revising or improving the enforcement of existing civil regulations and law to encourage positive behavior or hold accountable those people who contribute to crime and disorder by breaking rules. This area is related to the "place management" element of routine activities theory. Place managers are not necessarily directly responsible for preventing crime, but their behavior and activities in relation to their role at a place can affect crime opportunities. For example, a shopkeeper whose counter has a clear view to the street can act as an additional pair of eyes to deter illegal activities that might be occurring on the street outside. However, a shopkeeper who routinely sells alcohol to minors or a landlord who neglects his or her building may be contributing to problems. Cities often have ways to hold such people responsible using civil remedies. Enforcing these rules and developing multi-agency partnerships between communities, government agencies, and regulators to encourage compliance and reporting of problems can be effective at reducing crime (e.g. Eck & Wartell, 1999; Mazerolle, Price, & Roehl, 2000; Mazerolle & Ransley, 2005; Sherman, Farrington, Welsh, & MacKenzie, 2006; Taxman & McEwen, 1997; Weisburd & Eck, 2004).

4. **"It takes a village:" Building collective efficacy.** Collective efficacy is defined as "the willingness [of residents] to intervene for the common good" (Sampson et al., 1997, p. 919). It is closely related to social cohesion—the social bonds or ties between community members—and describes the mechanism by which a community can work together to prevent crime through enhanced formal rather than informal social controls. There is a long theoretical tradition in criminology suggesting that crime rates at places are linked to socially disorganized communities in which the ability of residents to self-regulate and take action to improve safety are weakened by the stresses of poverty, isolation, and residential turnover (Bursik Jr., 1988; Kubrin & Weitzer, 2003; Sampson & Groves, 1989; Shaw & McKay, 1942; Weisburd, 2012; Weisburd et al., 2015; Weisburd et al., 2012). On the other hand, research also shows that even at the street block level, places with high rates of collective efficacy tend to have lower crime rates over time and are unlikely to become crime hot spots (Weisburd, 2012; Weisburd et al., 2012). The strengthening of informal social control—the informal rules by which community members regulate each other (as opposed to formal social control, which is the enforcement of law by agents of the legal system)—is also related to the concept of guardianship. Residents know and trust each other, look out for each other, and take pride in and ownership of their space, which may explain the lower crime rates. A further benefit of building collective efficacy is that it ties into the research cited above suggesting that young people respond better to services and support provided in the community. In addition, when young people know, trust, and respect their family members and neighbors they have an incentive not to let these people down. Building collective efficacy is at the heart of the ABSPY strategy, including the CTF process, and engages all members of the community in looking out for youth.

While each hot spot team worked to develop interventions that were specifically tailored to the "logic models" of problems, risk factors, and local conditions they had developed for each hot spot, there were a number of similarities between the five locations in terms of the specific problems and the community's ideas for how to address them. Thus, the Core Team developed the community's recommendations into a set of interventions that were applied at some or all of the hot spots depending on whether they aligned with the logic models. These interventions are described below. The logic models for each hot spot, and for the overall ABPSY strategy, were finalized in the fifth CTF workshop and can be downloaded from the

ABSPY website.

Corner Greeters.* The Corner Greeters are a signature intervention of ABSPY. Corner Greeters is a series of "pop-up" events and activities that began immediately after the Gathering, over the summer of 2014. It was designed to build collective efficacy among residents by giving residents a reason to come together and get to know each tother, and to provide guardianship by "activating" public spaces in the hot spots where young people might otherwise gather in unstructured and unsupervised activities. Community events were held in each hot spot on a rotating weekly basis. Examples included origami-making (a quick activity for passengers waiting for the Light Rail), hula hoop making, and other art, craft, music, and cultural activities.

Involvement of youth was key to the success of Corner Greeters. The intervention specifically aimed to build collective efficacy and community ties among younger residents in Rainier Beach and to involve youth in productive activities. Each pop-up event is organized by young people, with support from the Rainier Beach Action Coalition (RBAC). Youth who participate recruit other youth and volunteers from around the neighborhoods to bring awareness to and sustain the Corner Greeter effort. RBAC has also sustained community engagement through Town Hall events to raise awareness of and participation in issues and activities that affect the community, and "citizen journalism" by young people. The latter is used to publicize events and spread positive messaging about the neighborhood through both traditional and social media outlets.

Plaza activation. The plaza outside South Shore K-8 school and the Rainier Beach Community Center at the Rainier and Henderson hot spot offered a gathering space for community events, but was underutilized and had become a "hang-out" spot for youth. A local police officer also pointed out problems with the environmental design of the space to one of the research partners—it was not clear where the public plaza ended and the private school property began, which made it difficult to enforce trespass laws to move groups of youth off the property. The CTF extended the collective efficacy and supervision aspects of the Corner Greeters initiative to "activate" the plaza for the community over the summer of 2014. This period also coincided with the Seattle Mayor's Office's "Summer of Safety" initiative across the city, which provided additional resources for youth to plan and lead events at the plaza with support from Seattle Parks and Recreation and the Core Team. These events involved food, art, music, and drill team competitions, and provided an opportunity for youth to become positively involved in the community and contribute to prosocial activities.

Campus Safety/Safe Passage. A key risk factor for youth crime at the Rainier and Henderson hot spot was the convergence of large numbers of young people on school days at one of the many schools located around the intersection. The intersection is home to the Rainier Beach campus, which includes Dunlap Elementary, South Shore K-8, Rainier Beach High School, and South Lake alternative school. An additional middle school, Aki Kurose, is not physically located at the intersection but is considered to be part of the campus. The Rainier Beach Community Center, which had historically been a hub for crime and disorder involving youth, was closed for renovations in 2011 and reopened at the end of September 2013, shortly before our interventions began. The community center is also located on the campus, directly adjacent to South Shore K-8 School and connected by the plaza as described above. Rainier and Henderson is also a major transit hub for students traveling to and from school as well as other commuters from the neighborhood. The problem-solving process revealed that youth crime was highest around the campus in the after-school hours. One local condition identified by many community members was the fact that the school day ended at the same time in all the schools, leading to large groups of young people converging on the community center, plaza, and intersection. This was associated with

spikes in crime and, in at least one case, a mass brawl involving up to 60 students.

Interventions on the Rainier Beach campus were supported by the Campus Safety Team (CST), a monthly multi-agency planning and communications team hosted by Seattle Parks and Recreation and involving Seattle Public Schools, the Community Center, Rainier Beach Library, Seattle Police Department, and the Boys and Girls Club of King County. The CST was crucial to the success of interventions at Rainier and Henderson, as it brought together entities that did not previously have any systematic approach to communication and strategic planning. Two creative interventions were developed by the CTF, Core Team, and CST at the campus, which drew on the supervision and structure and policy change intervention themes. The Safe Passage team, named for similar programs in Chicago and Los Angeles, provides supervision, guardianship, and a friendly face on the streets during the after-school hours when students are leaving school. Safe Passage staff are also authorized to break up fights and disturbances, but have typically been a positive presence and are well-loved by the students. The team is clearly identifiable by bright blue jackets labeled "Be Safe," which students often shout to them and each other as they pass by. The second intervention, also recommended by the CTF, was a successful request to change school release times to stagger the flow of youth moving through the campus. Instead of everyone leaving school at the same time, younger students now remain in school later to give older students a chance to disperse.

Early on in the implementation process, the CST also explored CPTED strategies to discourage youth from congregating, especially in areas where guardianship is limited, and to address the lack of a clear boundary between the school property and public plaza described above. The team's efforts resulted in the installation of a fence to separate the plaza and school areas from the adjacent bus stops and sidewalk, and signage to distinguish between school and park property. In addition, the Rainier Beach Community Center staff began locking the doors that face out to the plaza during certain high-traffic times and days to reduce pedestrian traffic and force community center users to enter through the front door, where there is always adult supervision.

Business engagement. The problem-solving process revealed that business owners, managers, and employees are key stakeholders at almost all of the five hot spots, many of which are characterized by mixed residential and commercial land use. The CTF recognized their role in improving youth and community safety and developed several interventions to engage with businesses, with the goal of helping them to better prevent crime. These interventions built on all four intervention themes: improving supervision by building guardianship and place management capacity among businesses, environmental and policy improvements, and building collective efficacy within the business community. A Business Outreach and Crime Prevention Education Team was developed through the Seattle Neighborhood Group. This was a multicultural and multilingual team that conducted surveys to assess business stakeholder concerns about crime and safety. The survey revealed several key needs. First, business owners reported that they often experienced victimization at their place of work but rarely reported the crime because they believed the police did not follow up or would not take them seriously. Second, business owners were not always aware of steps they could take, including CPTED and target hardening efforts, to protect their businesses and reduce opportunities for crime. The team used the findings of this outreach effort to develop partnerships between SPD and the local business owners to help them learn more about the process of crime reporting. SPD has stepped up its efforts to engage with local businesses in a timely manner after a crime is reported, and the precinct crime analysts are working to develop an alert system that will notify precinct supervisors when a crime is reported at a business within Rainier Beach to facilitate this follow-up. The team is also working to implement CPTED improvements with local businesses (see below) and has developed crime prevention information and education resources in the languages

most commonly spoken by business owners in the hot spots: Amharic, Oromo, Somali, Spanish, and Vietnamese.

Crime Prevention Through Environmental Design (CPTED). CPTED improvements on both public and private property are the focus of the final category of interventions, which address the themes of environmental and policy change. To assess the need for such changes, in 2014 the Seattle Neighborhood Group conducted comprehensive CPTED assessments of each hot spot location, all of which are available at the ABSPY website, and community teams conducted Community Appearance Index assessments for each location to assess visible signs of disorder (Figures 5–11). CPTED interventions on public property, such as improvements to the streets and bus shelters, property owned by the schools, and parks and trails around the neighborhood, have taken longer to implement because of the complexity of making often major physical infrastructure changes in partnership with other local government institutions, and these changes were just getting off the ground at the time of writing this report. However, the Business Outreach Team has worked closely with local businesses to help them make smaller changes to their storefronts, including clearing posters and stickers and painting out graffiti. For more substantial CPTED improvements, SNG partnered with South East Effective Development (SEED) to provide financial resources and technical assistance to implement CPTED storefront improvements for a handful of small family and minority-owned businesses in the hot spots. SEED worked with business and property owners and independent contractors to remove security bars from windows to improve sight lines, install fencing to limit access to less visible areas, improve curb appeal through exterior lighting upgrades, paint, and install new signage. ABSPY mobilized teams of community volunteers, including youth and service organizations such as The Mission Continues, a veterans' organization, to join forces with local business associations such as the Rainier Valley Chamber of Commerce and the Rainier Beach Merchants Association to remove litter, clear storm drains, and improve landscaping in the surrounding neighborhood.

2.4. Implementation

ABSPY is a complex, multifaceted set of interventions requiring coordination and contracting across a wide range of planning and implementation partners from numerous local government agencies, nonprofit organizations, and community members. As noted, some of the interventions were able to progress organically, such as the Corner Greeters initiative, while others like CPTED improvements to public property at the hot spots took years of planning to get off the ground. The business engagement intervention required several sequential steps, with the implementation and analysis of the needs assessment survey a necessary prerequisite to any substantive changes. The level of implementation also varied across the five hot spots, with some interventions applied only at specific hot spots (such as Safe Passage at Rainier and Henderson) and others covering all five target areas. As a result, ABSPY had a "rolling start" in May 2014 with The Gathering and the first Corner Greeter and plaza activation events, and full implementation was finally achieved in June 2016 with the first CPTED improvements in certain hot spots. In addition, there was a break in implementation of all interventions for the first three months of 2016 due to delays in the contracting process for the calendar year. A detailed timeline showing the progress of implementation and the months during which each type of intervention was active and inactive is shown in Figures 12 and 13.

The Core Team, including the research partners, remained actively engaged throughout the implementation process. Core Team meetings were (and continue to be) held monthly, and a separate Intervention Team, consisting of the contractors and community members responsible for implementing the interventions and facilitated by the Project Coordinator, also began meeting monthly to discuss progress and

concerns specifically related to implementation. Intervention Team meetings initially took place toward the end of the Core Team meeting, but eventually a separate meeting time was organized to allow both teams more time for discussion and planning.

In December 2015 a second Gathering event was organized to celebrate ABSPY's progress during the first full year of implementation. The event involved music; dancing; presentations and exhibitions from Core Team members, SPD, and various community organizations; activities for participants, including an interactive display of statements made by attendees about what makes Rainier Beach great and what they looked forward to in 2016; and food donated by community partners.

3. The ABSPY Evaluation

The Center for Evidence-Based Crime Policy (CEBCP) at George Mason University conducted a two-part evaluation to assess the effectiveness of ABSPY at reducing youth and overall crime. We use monthly data on crime and calls for police service to both descriptively and statistically assess the impact of ABSPY in the hot spots relative to their comparison areas, the Rainier Beach neighborhood, and SPD's South Precinct. Second, we conducted a two-wave, door-to-door street and household survey in the five hot spots and their comparison areas in the summer of 2014 and again in the summer of 2016 to assess community perceptions of crime, safety, and collective efficacy.

3.1. Analysis of Crime and Calls for Service

Data for our evaluation of ABSPY's impact on crime and calls for service came from the same SPD datasets provided for the initial hot spots identification described above. SPD expanded the initial 2012 data to include 2011 through August 2016 (during the ABSPY planning phase, SPD and CEBCP entered into a monthly data sharing agreement), as well as a separate database from SPD's Computer Aided Dispatch (CAD) system, which captures calls for police service. We selected January 2011 as the start date because changes in SPD's data collection and recording methods prior to this date increase the risk that earlier data are not comparable. For the evaluation we assessed the impact of ABSPY on several different crime outcomes, as follows:

1. **Calls for police service.** Calls for service data reflect both 911 calls from the public and police "on-views"—situations that officers log as they come across them in the course of their patrol. We examined calls for service because they provide the largest number of units of analysis at each location (not all calls for service result in a police incident report), so offer the most statistical power for analysis. They also reflect the concerns of the community; i.e., what community members are calling the police about. However, they do not contain reliable information about the age of suspects or victims as this is verified by the officer if and when a report is taken. It is also important to note that just because someone calls the police it does not necessarily mean that a crime occurred, and that the nature of the call can change from the initial call to the final investigation. Reflecting this, SPD's CAD database classifies calls as "initial" and "final," and within each of these two categories are three further subcategories: "translation," "rollup 1," and "rollup 2." Final Translation provides the largest number of calls and the most detail; however, we made the decision to use Final Rollup 2 in our analysis because this category excludes traffic calls, police checks (such as abandoned vehicles), and non-crime-related police activity logs (for example, when an officer logs that they are on a break a CAD record is created) that are not relevant to our evaluation. Note that Final Rollup 2 also excludes the offense types we are not authorized to report to the public as discussed above.

2. **Police incident reports.** As described earlier, police incident reports are taken when police respond to a call and find some substantive evidence that a crime may have occurred (such as a victim or witness willing to make a report). We evaluated the impact of the evaluation on all incident reports at each location (juvenile, youth, and adult), and because we are reporting combined crime numbers we use non-reportable incident types in these analyses.

3. **Juvenile/youth incident reports.** We also filtered out those incident reports that involve a juvenile or youth (age 18-25) as a suspect, arrestee, or victim and analyzed the impact of the interventions

on that subset of reports. Typically in our data reports to the Core Team and community during the ABSPY intervention period we have separated out these two age groups, but due to the small number of crimes overall we have combined them in our evaluation to reduce challenges with the statistical analysis.

4. **Part I violent and property crimes.** Most police agencies report their crime numbers to the FBI's Uniform Crime Reporting (UCR) program. The UCR requires the reporting of eight "index crimes"—four violent crime types and four property crime types—that are considered to be serious crimes that occur regularly in all areas of the United States and are likely to be reported to the police. These are also known as Part I crimes. Part I violent crimes are homicide, rape, robbery, and aggravated assault. Part I property crimes are burglary, larceny-theft, motor vehicle theft (counted separately from larceny-theft), and arson. Following the logic that these crimes are likely to be reported to the police and thus reflect a fairly accurate picture of serious crime in the hot spots, we assess the impact of the interventions on each category of Part I crime. We caution that we do not have access to the criteria SPD uses to determine which specific violations of Washington state criminal law are counted in each of these eight categories; we did our own classification based on the offense type descriptions provided in the SPD dataset. Thus, our counts of Part I crimes do not necessarily match those that may be provided by SPD.

5. **Violent crime.** We also combine Part I violent crimes and simple assault in a separate analysis. While the hot spots selection for ABSPY was based on all crime types due to relatively low numbers of all crimes at the street block level, the original concern of the community when ABSPY was developed was juvenile and youth violence. Thus, we examine the impact of ABSPY on a broader range of violent crimes. We decided to use all violent incident reports rather than limiting our analysis to those including juvenile and youth due to the small number of crimes overall.

6. **Part II crimes.** The UCR also collects arrest data only for a set of less serious crimes, known as Part II crimes. These are simple assault, forgery and counterfeiting, fraud, embezzlement, stolen property, vandalism, weapons, prostitution, sex offenses (except rape and prostitution), drug and liquor violations, gambling, offenses against the family and children, driving under the influence, drunkenness, disorderly conduct, vagrancy, suspicious circumstances, curfew and loitering violations, juvenile runaways, and all other offense types except traffic violations. We hypothesized that if ABSPY reduces serious crime but increases collective efficacy we might in fact see increases in the number of Part II crimes reported, as community members become more likely to call the police and more empowered to take action against minor quality of life issues. Note that while police departments are only required to report arrest data for Part II crimes, we use all incident reports in our analysis. We also exclude driving under the influence as explained above.

3.1.1. Analytic strategy

The rolling intervention start date and breaks in the interventions present a challenge for the analysis because there is no clear distinction between "pre" and "post" implementation. This makes it impossible to directly assess a change in crime rates in the post-implementation period that could be attributed to the interventions. However, with access to a long time-series of monthly data we were able to use a difference-in-differences modeling approach using Poisson regression with robust standard errors to estimate the effects of the interventions on monthly crime outcomes in the treatment and comparison sites according to whether the treatment was active or inactive in a given month. The Poisson difference-in-

differences model followed the methodology described in Kondo, Keene, Hohl, MacDonald, and Branas (2015) and the recommendations of Berk and MacDonald (2008). The robust standard errors provide a more conservative estimate of statistical significance, given overdispersion in the model and the dependency between treatment-active and treatment-inactive observations in each treatment and comparison site.

We first present a time series graph showing the monthly numbers of each crime outcome alongside key project milestones. We then report on a series of difference-in-differences models to estimate causal effects of the interventions on each of the outcomes described above (calls for police service, all reported incidents, reported incidents involving youth, Part I violence, Part I property crime, and violent crime) at the Rainier Beach hot spots compared to the comparison sites. We examined the overall effect of all the interventions at the pooled treatment (hot spot) and comparison sites, using the timelines in Figures 12 and 13 to identify periods when at least one intervention was active or no interventions were active. We also assessed each treatment-comparison pair separately, using the intervention-active and intervention-inactive dates for only those interventions that were applied at the specific hot spot, and the impact of each type of intervention at the hot spots in which it was applied (for example, the analysis of the business engagement intervention was conducted using pooled crime outcomes for the Rose Street and Light Rail hot spots and their respective comparison sites). Finally, we present percentage change graphs for the pooled hot spots relative to the Rainier Beach neighborhood as a whole, and for the Rainier Beach neighborhood relative to the South Precinct.

In each difference-in-difference model, the unit of analysis is the number of each type of outcome (i) per month in each treatment and comparison site (t) from January 2011 to August 2016 (68 months). Each model includes, at minimum, a crime outcome, an intervention active/inactive term, a treatment assignment term, and a difference-in-differences interaction term, P_{it} x A_{it}, where P_{it} indicates whether the intervention period was active (1) or inactive (0) and A_{it} indicates assignment to the treatment (1) or comparison (0) condition. Some of the models also control for seasonality and/or the overall crime trend over time through the inclusion of monthly indicator variables. However, where these controls did not significantly improve model fit or predictive value we opted for the simplest model. We use exponentiated coefficients from the Poisson regression models, which represent the Incidence Rate Ratio (IRR). The IRR, which is a number between zero and with no upper boundary, represents the ratio of crime counts in the treatment area to crime counts in the comparison area associated with the intervention period. An IRR of 1 indicates no difference between the treatment and comparison areas. In this report we simplify the IRR by describing it as a percentage difference in crime rates. For example, an IRR of 1.25 indicates that the crime rate in the treatment area is 25 percent higher than the comparison area, while an IRR of 0.75 indicates that it is 25 percent lower. All analyses were conducted in Stata 14.

3.2. Community Surveys

In addition to the analysis of crime, we also conducted a two-wave community survey in the hot spots and comparison areas to assess community perceptions of crime, safety, collective efficacy and social cohesion, the police, and ABSPY itself. The survey took the form of in-person interviews with residents, business owners and employees, and other space users in residences, businesses, and on the street in each location. The first (baseline) survey was conducted in the summer of 2014, coinciding with the initial Corner Greeter events, and the second (follow-up) survey was conducted in the summer of 2016. In our discussion of the survey findings below we label the baseline survey results as "pre" and the follow-up results as "post," even though we recognize that the first survey was not conducted before all the

interventions began. However, we believe the rolling start and increasing dosage of interventions in between the baseline and follow-up surveys would have created a sufficient difference in local conditions in the treatment hot spots between 2014 and 2016 to detect some change through the surveys.

The survey methodology was essentially the same in both waves. Our original plan was to collect 10 to 20 household surveys in each site in each wave, depending on the size and residential/business density of the location. For several reasons, we changed our strategy to collect a mixture of household, street, and business surveys. First, once the hot spots were selected it became clear that not all of our sites were primarily residential. Some, like Rose Street, also offered a number of businesses in addition to residential dwellings that could be sampled like households, but others, like the Light Rail, had a few businesses (and no residences) but were mostly characterized by foot traffic (for example, people walking to or waiting at the Light Rail station). Second, our baseline survey period coincided with the Mayor's Office's "Summer of Safety" in Rainier Beach and other areas in the South Precinct. One event that was held as part of this initiative was a "find it, fix it" walk in a number of micro-locations, including several of our treatment and control hot spots. This involved representatives from the Mayor's Office walking the blocks with neighborhood residents and hearing their suggestions for environmental changes that needed to be made, such as street light replacements. Because this was not an ABSPY initiative and risked contaminating our survey data we had to begin our baseline survey more quickly than anticipated. We decided that a street survey would provide an opportunity to reach a larger number of participants in a shorter period of time, as it did not involve having to create a sample of addresses and then return to those addresses multiple times in order to get a response. To encourage participation in the street survey we set up "pop-up" tents in the hot spot and comparison site blocks, and Seattle Neighborhood Group donated lemonade and granola bars to persuade people to stop as they were passing through. Because we had used this process in the baseline survey, we replicated it again in the follow-up wave.

In addition to the street surveys, we also used a traditional household sampling approach to identify residences for door-to-door surveys. We obtained lists of addresses at each hot spot and removed vacant properties through a visual inspection. Based on the research team's prior experience conducting household surveys in other areas, we estimated that it was necessary to sample 2.5 times the number of non-vacant addresses in order to meet our target number of surveys. Thus, we sampled up to 25 households in each location (and businesses, in commercial or mixed-use locations) in an effort to meet our minimum target of 10 surveys. We aimed for our minimum rather than maximum target because of the opportunity to increase our sample size through street surveys. This meant we did not have to release too many addresses in our sample, allowing us to maintain a reasonable contact and response rate in the household survey. In the follow-up wave we returned to the same addresses we surveyed in the baseline wave rather than resampling.

Surveys were conducted by a team of local researchers hired from universities in the Seattle area and the Rainier Beach community. We hired several Rainier Beach High School students (who were at least 18 years old) to assist with survey data collection in both waves. Two researchers acted as team coordinators in each wave and were responsible for organizing schedules, setting up the tents and refreshments for the street survey, and ensuring the paper surveys and consent forms were properly documented and stored. The researchers were trained according to existing data collection and safety protocols developed by CEBCP, which included a requirement to work in pairs and communicate by text message when they entered and left someone's residence, and if a household survey was taking longer than expected. Researchers were trained to begin the survey by showing participants maps of the sites to orient participants to the specific hot spot of interest when answering questions about their place-based perceptions.

We collected a total of 300 valid surveys in each wave (600 in total) across the ten sites (Table 1). Most of the surveys were collected on the street. While we made an effort in the follow-up wave to return to households surveyed in the baseline wave, we collected fewer household surveys in the follow-up wave—13 in the hot spots and 16 in the comparison sites—compared to the baseline wave, in which we collected 34 in the hot spots and 38 in the comparison sites (Table 2).

While ABPSY has a youth focus, we decided not to seek participation of juveniles under the age of 18 in our surveys due to the additional requirement of obtaining parental consent to participate in research. We believed this would be impractical given that most of the surveys would be occurring on the street. Thus, all participants had to be 18 years old or over, although we were successful in identifying younger participants. Approximately one-quarter of respondents in both waves and across all sites were in the 18 to 25 age group (although our baseline comparison site sample skews slightly older; Table 3). The gender distribution of the sample skewed male in the baseline survey but was balanced in the follow-up (Table 4). A majority of respondents in both waves identified as Black or African American, followed by White (Table 5). In the first wave, around 60-65 percent of respondents stated that they were born in the United States. This percentage was slightly higher in the follow-up survey, although respondents in the hot spots were slightly less likely to have been born in the United States than those in the comparison sites (Table 6). The majority of those who were born overseas had typically lived in the United States for ten years or more. Respondents were slightly more likely to have children than not (Table 7). Most respondents had at least a high school or some college education; the number of respondents with a bachelors or higher degree was slightly higher in the comparison sites than the treatment sites (Table 8). Around one-quarter of the baseline sample was not working; this proportion had reduced to less than one-fifth in the follow-up sample (Table 9). Most of those who were not working stated that they were in school. In the first wave around half of respondents stated that their main activity at the hot spot was living there; this decreased to around one-third in the follow-up, likely reflecting the smaller number of household surveys conducted in that wave (Table 10). Around one-fifth to one-quarter of respondents in all waves had been doing their main activity at the location for 10 years or more; the same proportion had been there for less than one year. About one-third had been doing their main activity for between one and five years.

In this report we use simple descriptive statistics to explore the survey responses across the pooled treatment and comparison groups. The relatively small number of responses limits the value of between-site comparisons and more complex statistical methods. Most of the response options to our survey questions were in the form of Likert scales—scales of 1-4 or 1-5 assessing agreement, frequency, or likelihood. Higher numbers reflected higher levels of agreement or greater frequency/likelihood. For ease of presentation, we have combined responses such as "agree" and "strongly agree" in our discussion of the results and simply indicate the percentage of respondents giving a "positive" (shown in green on the following graphs) or "negative" (grey) response. Classification of responses as positive or negative depends on the framing of the question; for example, if a respondent agreed (3 on our scale) or strongly agreed (4) with a statement relating to improvements, greater feelings of safety, higher levels of collective efficacy, and so on (such as "This place is becoming safer"), this would be classified as a positive response. However, if the respondent believed it was likely or very likely that a violent crime would occur on their block or said they were worried about violent crime (also a rating of 3 or 4), this would be classified as a negative response.

In some cases, we asked multiple survey questions to assess underlying concepts such as social cohesion, collective efficacy, fear of crime, and satisfaction with/legitimacy of police. In the following discussion we have combined these responses into scales to reflect each concept by taking the average of each

respondent's answers to the series of questions. We used Cronbach's alpha (α) to assess the extent to which each question in the scale was capturing the same underlying concept. We considered $\alpha = 0.70$ as the minimum cut-off for an acceptable scale. We recoded scale responses as negative if the respondent's average response across all the questions was less than or equal to 2; neutral if their average was greater than 2 but less than 3; and positive if their average was greater than or equal to 3. For scales that indicated frequency we kept the original coding scheme, where 1 indicated "less than once a month," 2 = "a few times a month," 3 = "a few times a week," and 4 = "every day." The averages of each response in the frequency scales were recoded as follows:

- Average of less than 1.5: recoded to 1
- Average of 1.5 or more, but less than 2.5: 2
- Average of 2.5 or more, but less than 3.5: 3
- Average of 3.5 or more: 4

4. Discussion of Findings

4.1. Analysis of Crime Data

In the following sections we discuss our analyses of each of the crime outcomes described above for the pooled treatment and control sites, each separate treatment and control pair, and each intervention type. For each outcome and location/intervention we present a detailed graph showing the fluctuation in crime rates by month as they relate to significant events during the course of ABSPY's development and implementation. We also present the difference-in-differences analyses estimating the effects of ABSPY on crime outcomes according to the specific months in which the treatment was active or inactive in a simplified table showing the percentage difference between the rate of the crime outcome in the treatment and comparison sites.[7] This section concludes with a descriptive analysis of the impact of changes in the hot spots on crime in Rainier Beach, and of changes in Rainier Beach on crime in the South Precinct overall.

4.1.1. Calls for police service

Figure 14 shows a slight downward trend in calls for service in the combined treatment sites and a more substantial decline in the combined comparison sites over the project period. The ABSPY interventions are associated with a statistically significant 33 percent higher rate of calls for service in the treatment sites relative to the comparison sites (Table 11). It is important to note that a higher crime rate in the treatment sites does not necessarily mean the interventions caused calls for service or crime to increase; it can simply mean that the decrease in the comparison sites was larger than the decrease in the treatment sites. In this case we can use the visual depiction of the data in Figure 14 to conclude that calls declined in both groups of sites but the rate of the decline was slower in the treatment sites. Interestingly, the number of calls in the treatment and comparison sites was relatively even before the initial ABSPY process started, and then diverged after the planning and implementation began. It is possible this stemmed from the reopening of the Rainier Beach Community Center, which would have brought many more people to the neighborhood, but the difference could also reflect a greater willingness to call the police or get involved in local issues as a result of ABSPY (however, we caution that we cannot make this claim with certainty).

Breaking out the hot spots and their matched comparisons individually provides some more insight into these findings. The rate of calls was significantly higher at Rainier and Henderson (21%), Lake Washington (58%), and Safeway (71%) relative to their comparisons (Figures 16–19; Table 11). From the graphs it appears that the number of calls declined slightly at Rainier and Henderson and remained relatively stable at Lake Washington, but that these sites were not well-matched with their comparisons in terms of calls for service. Both hot spots had many more calls for service in general than their comparison sites. However, at Safeway calls appear to have increased after ABSPY began. This is interesting because it coincides with the arrival of a new Safeway manager, who was extremely proactive about crime prevention and willing to work with the ABSPY team and SPD to improve place management at this location. The manager was certainly more willing to call the police to shut down problems before they got out of control. The rate of calls decreased by 16 percent at the Light Rail and by 9 percent at Rose Street, but these decreases were not statistically significant (Figures 15–17).

[7] Tables showing the full statistical models and associated statistics are available on request from the first author.

With the exception of CPTED, each of the individual ABSPY interventions was also associated with higher rates of calls for service at the locations in which they were applied, although not all of these these relationships were statistically significant (Table 11). The rate of calls for service was 26 percent higher when the Corner Greeters were active at the hot spots, 36 percent higher during the Plaza Activation period at Rainier and Henderson, and 55 percent higher during the business engagement at Rose Street and the Light Rail. However, the graphs do not indicate any clear increase in calls during these periods, so it may simply be the case that calls for service were declining more rapidly at the comparison sites (Figures 20–23). The Safe Passage/campus safety interventions were associated with a non-significant 12 percent higher rate of calls (Figure 22). CPTED made no difference to the rate of calls, but we note that the CPTED interventions did not start until June 2016, just two months before the end of the evaluation period.

Shortly after we completed our analysis of police calls for service, SPD advised that they had discovered a new officer had inadvertently been miscoding police-initiated checks as trespass calls for several months during 2016, potentially affecting our assessment of Part II calls at the Rainier and Henderson and Our Safe Way hot spots. We conducted a sensitivity analysis to examine whether this error had any impact on our findings. We examined the total number of trespass calls at these two locations and the proportion that were police-initiated. Overall, only 90 calls at the two affected hot spots were police-initiated trespass calls. These numbers did not substantially differ from the number of trespass calls at these sites in 2015, and we did not find any indication of a spike in police-initiated trespass calls during the months the officer was working. On this basis, we concluded that the impact of the error was likely minimal and would not affect our findings. According to SPD, none of the miscoded calls resulted in an arrest or an incident report being written, so our analysis of crime incidents is not affected.

4.1.2. Crime incidents

The trend in crime incidents over time reflects that of calls for service (Figure 25). The number of incidents was similar in the treatment and comparison sites and then diverged around the time the ABSPY CTF work began, with a larger number of reports being taken at the hot spots. ABSPY is associated with a statistically significant 20 percent higher rate of incidents in the hot spots relative to the comparison sites (Table 12). It appears from the graph that the number of incidents was relatively stable in the treatment sites, but reduced in the comparison sites. The difference could also be related to the higher rate of calls in some of the sites—if residents are calling the police more often, the police will have more opportunities to take incident reports.

The rate of incidents was higher in the hot spot relative to the comparison in all but the Light Rail site, where it was 10 percent lower. The differences ranged from 5 percent higher at Rose Street to 26 percent at Lake Washington. However, none of these differences was statistically significant. The graphs suggest that the actual number of incidents did fall during ABSPY in most of the hot spots, except Safeway (Figures 26–30).

Each intervention was associated with between 7 (Business Engagement) and 48 percent (CPTED) higher rates of crime in the hot spots (Figures 31–35); however, only the difference in the CPTED sites was statistically significant (Table 12). This is interesting given that the rate of calls for service was not significantly higher in the CPTED sites, but it is difficult to draw any conclusions about the impact of CPTED in the short time those interventions have been active. Figure 35 suggests that incidents increased in the final month of the evaluation—the second month that CPTED interventions were active—but it is too early to tell if this is a longer-term trend or just random fluctuation.

4.1.3. Youth incidents

We also examined incidents involving juveniles under 18 and youth age 18-25 as suspects, arrestees, or victims. Again, the trends in youth incidents over time in Figure 36 look similar to those for calls for service and overall incidents. ABSPY is associated with a 39 percent higher rate of youth incidents in the hot spots relative to the comparison sites, which is statistically significant (Table 13).

The rate of youth incidents was higher in each hot spot relative to its comparison site, but these differences were statistically significant only at Lake Washington and Safeway, where the rate differences were substantial (273% and 103% respectively). However, while these increases appear to be extremely large, we note that the actual number of youth incidents in the sites overall was very small—Figure 36 shows that there were no more than 25 youth incidents in any given month over the course of the analysis period in all five hot spot sites combined (see also Figures 37–41). Thus, even small fluctuations can be magnified. This is likely the case at Safeway, where the graph shows a very small number of youth incidents in both the hot spot and the comparison site, and there does not appear to be an actual increase in crime (Figure 41). However, youth incidents do appear to have increased at Lake Washington (Figure 40). There are three possible reasons for this: first, the graph suggests that Lake Washington and its comparison site were not well-matched in terms of youth incidents. The number of incidents at the comparison site was consistently low and did not vary much. Second, Lake Washington apartments were renovated during the project period and the complex was only at around 50 percent occupancy for some of the time. Toward the end of the analysis period more people started moving back in, which would have raised the population (and, potentially, the youth population), increasing the likelihood of youth incidents occurring. Third, Lake Washington received the lowest dosage of interventions during the project period, with only the Corner Greeter interventions active there. This may have been insufficient to create longer-term change.

Nonetheless, the Corner Greeter intervention was associated with a statistically significant 43 percent higher rate of youth incidents (Figures 42–46; Table 12). The rate of youth incidents was also significantly higher during the plaza activation intervention at Rainier and Henderson, and non-significantly higher rates were associated with Safe Passage and the CPTED interventions. The business engagement intervention made no difference to youth incidents, which is not surprising given that youth crime prevention was an indirect rather than direct goal of the business outreach. As before, it does not appear that crime actually increased when the Corner Greeter or plaza activation interventions were happening. The number of crimes was just much higher in the hot spots than the comparison sites. It is also worth noting that these two interventions happened primarily during the summer months when crime was higher, although our difference-in-differences models for these two analyses did control for seasonality.

4.1.4. Part I crimes

ABSPY had no statistically significant effects on rates of Part I violent (Table 14) or Part I property (Table 15) crime incidents in the hot spots (see also Figures 47 and 58). Nonetheless, there are some promising findings. For example, ABSPY was associated with a 44 percent lower rate of serious violent crime at Safeway, which is notable given the much higher rate of calls and overall incidents there. The business engagement intervention was also associated with a 21 percent lower rate of violent crime in the hot spots where it took place. ABSPY was also associated with lower rates of serious property crime at Rose Street (29 percent) and Lake Washington (25 percent), and the business engagement intervention was

associated with a 16 percent lower property crime rate. Overall, this suggests that our business engagement efforts may be beginning to have an effect on helping business and property owners take steps to reduce crime problems (see Figures 48–68).

4.1.5. Violent crime

As with Part I crimes, there were no statistically significant effects of ABSPY on violent crime overall (Part I violence and simple assault; Table 16 and Figure 69). However, some of the same promising effects are visible in the site-by-site and individual intervention analyses. Violent crime rates were lower at Rose Street (25%), Light Rail (47%), and Safeway (29%), and 31 percent lower while the business engagement intervention was active at Rose Street and the Light Rail (Figures 70–79). We caution that again, the actual number of crimes at each site is very low so it is not possible to conclude with certainty that the interventions are driving these changes. However, the direction of some of the effects is promising.

4.1.6. Part II crimes

Finally, we examined the impact of ABSPY on Part II crimes. There were some statistically significant effects here, likely reflecting the larger number of Part II crimes relative to more serious issues (it is more difficult to detect statistically significant effects when the outcome is relatively rare). ABSPY was associated with a statistically significant 30 percent higher rate of crime in the combined treatment sites relative to the comparison areas (Table 17). Figure 80 suggests that the number of Part II crimes may have actually increased, although the number appears to have declined since interventions resumed after the break in early 2016. The Part II crime rate was also significantly higher at Lake Washington (116%), but the numbers are fairly small and the comparison site had a very low, stable crime rate. We caution that the 74 percent decline at the Light Rail is based on no more than 3 crimes per month and is not reliable (Figures 81–85). It is interesting that the rate of Part II crimes was higher at Safeway even though Part I violent crimes declined. This could suggest that the management's focus on place management led to more reporting of lower level crime problems that ultimately impacted more serious crimes, in line with the "broken windows" theory (Wilson & Kelling, 1982).

There were no statistically significant effects associated with any of the interventions, although the impact of the plaza activation, which is associated with a 125 percent increase in Part II crimes, was marginally significant ($p = .051$). Similar to the findings at Safeway, the rate of Part II crimes in the business engagement sites was higher even though more serious crimes declined, perhaps suggesting a more aggressive focus on disorder and quality of life issues (Figures 86–90).

4.1.7. Neighborhood effects

We also examined how crime trends in the hot spots compared with those in the overall Rainier Beach neighborhood and the South Precinct overall. Due to the large number of unmeasured factors external to ABSPY that could affect crime rates in the broader geographic areas we do not statistically assess causal effects in this analysis.

Figures 91–97 show how the percentage change in each crime outcome in the hot spots before and after the interventions compares to the change in the neighborhood and South Precinct. To simplify the rolling intervention start dates and changes in implementation we simply use May 2014 as the cut-off date between pre-intervention and post-intervention, reflecting the end of the CTF planning work and beginning of the first interventions. Each crime outcome type was lower in the post-intervention period for the hot spots, the neighborhood, and the precinct, but in most cases the neighborhood and precinct experienced a larger reduction in crime than the hot spots. This corresponds with information from SPD's South Precinct captain indicating that crime in the precinct overall has declined at a faster rate than the rest of the city in the last few years, which complicates our analysis. In addition, the Rainier Beach hot spots were among the "hottest" and most persistent hot spots in the precinct, so it may not be reasonable to expect their crime rates to decline very rapidly in a relatively short period of time. Nonetheless, one very positive finding is apparent in Figure 94: the decline in serious violent crime in the hot spots (by 43 percent) was larger than the corresponding declines in the neighborhood and the precinct (39 percent and 35 percent respectively). While we again caution that we cannot prove that this change was caused by ABSPY, it is promising considering that ABSPY's ultimate goal was to reduce violent crime among youth.

4.2. Community Survey

Like the analysis of crime outcomes, our survey revealed promising findings but few major changes associated with ABSPY. Again, it is likely that the existing differences between the treatment and comparison sites (particularly the extent to which our comparison sites have "gentrified" in recent years; this is discussed more below) may have diluted any changes in the hot spots.

One finding that is very positive for ABSPY is the proportion of respondents who believed crime in the hot spot had gotten better in the past year (Figure 98). We asked this question in both waves of the survey. In the follow-up, the proportion of respondents in the treatment sites who answered this question positively (i.e. they believed crime had gotten better) increased by 24 percentage points. There was an increase in the comparison sites too, but only by 15 points. Perceptions of crime also improved from a lower baseline in the treatment hot spots compared to the comparison areas. Overall, it appears that more people in the Rainier Beach hot spots perceived that crime had gone down even though our police data analysis indicated that on most measures crime reductions in the comparison sites and elsewhere in the South Precinct were larger. There was also a fairly high degree of recognition of key ABSPY interventions among respondents in the treatment sites in the follow-up survey, and a very high level of satisfaction with those interventions among those who said they were aware of them. Sixty-nine percent of respondents had noticed the improvements to local businesses, 51 percent had noticed the Corner Greeters, and 68 percent were aware of the Safe Passage program.[8] Of those who had noticed the interventions, 78 percent (of 98 respondents) said they were satisfied or very satisfied with the improvements to businesses, 77 percent of 64 respondents were satisfied with the Corner Greeters, and 90 percent of 77 respondents were satisfied with Safe Passage.

ABSPY did not appear to have an impact on feelings of safety (Figure 99). We asked respondents if they felt safe walking on the street during the day and at night, in their school (if applicable), while waiting for the Light Rail and/or bus, in their homes, and at their job. We also asked if they agreed that the location

[8] The lower level of recognition of Corner Greeters may be due to the way we asked the question—while the Core Team is familiar with the "Corner Greeters" name, it is possible that residents may not be aware that the program is so named. Had we asked about pop-up activities or described the program in some other way the responses may have been different.

was becoming safer and is a safe place for youth. Each of these items was combined into a "feelings of safety" scale with α = 0.86. In general, fewer respondents in the Rainier Beach hot spots said that they felt safe than those in the comparison sites. However, the proportion of respondents saying they felt safe increased by 7 percentage points between the baseline and follow-up surveys in both the treatment and comparison sites.

We constructed a "concerns about crime and disorder" scale based on questions that asked if respondents were worried about gangs, drugs, violent crime, property crime, guns, graffiti and vandalism, people from other neighborhoods coming in to commit crime, or local services closing and a loss of opportunities for youth because of crime problems at the hot spot; and the extent to which they agreed that broken windows, graffiti, vacant lots, trash and broken glass, poor street lighting, and signs of drug or alcohol use were a problem (α = 0.91). Figure 100 shows that the proportion of people in the treatment sites who said they were not very concerned about crime and disorder actually decreased slightly from 42 to 38 percent from the baseline to follow-up periods, while the proportion in the comparison sites increased very slightly from 33 to 36 percent. On the other hand, the number of people in the treatment sites who were more concerned also decreased from 14 to 8 percent—more people gave a "neutral" response in the follow-up survey. The scale masks some interesting differences in the individual questions: for example, there was a 10 percentage point increase in the number of respondents who were more concerned about vacant properties in the treatment sites from the baseline to the follow-up survey, from 46 to 56 percent (compared to a 3 percent increase in the comparison sites from 47 to 50 percent). However, in the comparison sites respondents' worries about gangs increased substantially from 39 percent at baseline to 51 percent in the follow-up, but respondents from the Rainier Beach hot spots were less concerned about gangs (34 percent were concerned at baseline and 36 percent in the follow-up). While we cannot prove a causal relationship, it is possible that ABSPY activities focused attention on crime and disorder in Rainier Beach and helped residents become more aware of these issues, which could be positive if those residents then felt empowered to join the efforts to reduce them.

We also asked respondents how frequently they believed various signs of disorder—people arguing or fighting, groups of youth hanging out and causing problems, people drinking in public or acting drunk/high, people making too much noise at night, people selling or using drugs, prostitution, and vandalism—had occurred at the hot spot over the past year. These were combined into a disorder frequency scale with α = 0.93 (Figure 101). It appears that respondents in both the comparison and treatment sites perceived that disorder problems occurred less frequently in the follow-up survey compared to baseline. However, respondents in the treatment sites perceived a much larger reduction in the frequency of disorder than those in the comparison sites. For example, the percentage of respondents who thought disorder occurred every day halved from 35 to 16 percent in the treatment sites in the follow-up survey.

However, this perceived reduction in the frequency of lower-level disorder problems did not translate into a perception that more serious crime would be less likely to occur at the hot spots (Figure 102). Respondents indicated how likely they thought it was that someone could be injured or killed with a weapon, sexually assaulted, injured in a fight, or robbed at the hot spots; that shots would be fired; that a purse, phone, electronic device, vehicle, or property from a vehicle would be stolen; or that shoplifting or burglary could happen. The combined "likelihood of crime" scale had an α value of 0.94. While the proportion of respondents who believed these crimes would be likely or very likely at the hot spots decreased from baseline to follow-up in both the treatment and comparison sites, in both waves and both sites over half of respondents still believed that these crimes were likely to occur and very few thought that they were unlikely.

While there did not appear to be any effects on feelings of safety or perceptions about crime in the hot spots, we did find that the percentage of people who said they had ever been personally victimized at the hot spot decreased in the treatment areas, from 27 percent of treatment site respondents at baseline to 17 percent in the follow-up survey, while the percentage of comparison site respondents who had been victimized in their hot spots increased from 15 percent at baseline to 25 percent in the follow-up. While this is promising as it suggests that the individual risk of victimization may have fallen in the ABSPY hot spots, we caution that different people were interviewed in each wave and it may simply be the case that our follow-up sample had different characteristics unrelated to ABSPY that impacted their victimization risk. For example, our follow-up respondents were slightly more likely to be female (which increases the risk for some types of victimization but not others) and White.

We asked respondents a number of questions to assess social cohesion, an important precursor to collective efficacy. Our social cohesion scale (α = 0.84) reflects the extent to which respondents agreed that there were good stores, services, and activities for young people at the hot spot; whether residents, business owners, and property owners at the hot spot cared about the community; whether there were opportunities to get involved in community activities; whether people watched out for each other and knew each other by name; and whether people helped each other out, trusted each other, and would call the police if there was a problem. Overall, there was little change in perceptions of social cohesion across each wave in the treatment or comparison sites (Figure 103); however, there was a slight increase in the percentage of respondents in treatment hot spots who had positive or neutral rather than negative attitudes toward levels of social cohesion at the hot spots, while the proportion of positive responses declined slightly in the comparison areas.

To assess collective efficacy we asked respondents how likely they thought it was that someone at the hot spot would do something if young people were skipping school and hanging out on the street; a young person was showing disrespect to an adult; a fight happened; or people were spraying graffiti or vandalizing property. On the collective efficacy scale (α = 0.77) there were no differences between the treatment and comparison sites or between the waves in the percentage of respondents giving a positive response (i.e., saying that it was more likely that someone would step in; Figure 104). In both the treatment and comparison sites the proportion of positive responses increased slightly between the two waves, but only by a few percentage points. However, there were some interesting differences between the individual questions. In both the treatment and comparison sites respondents were more likely to say that someone would intervene in a fight or vandalism than if young people were skipping school or being disrespectful. The percentage increases between baseline and follow-up were also larger for treatment site respondents than for those in the comparison sites for intervening in vandalism (10 percent vs. 6 percent) and disrespect (6 percent vs. 1 percent).

Finally, we asked respondents a number of questions about the police. First, we created a scale based on how frequently respondents said they saw the police engaged in certain activities at the hot spot (walking or biking on the street, driving in patrol cars, making an arrest, making a traffic stop; checking on a business; or involved in community activities; α = 0.80). We also created a police satisfaction scale based on whether respondents agreed that the police did a good job preventing crime and controlling drug activity at the hot spot (α = 0.86),[9] and a police legitimacy scale that combined respondents' perceptions of whether police at the hot spot treated people fairly, treated people with respect, and cared about solving problems (α = 0.88).

[9]We excluded an additional question about whether respondents thought the police did a good job enforcing traffic laws as it reduced the reliability of the scale.

There was very little change in either the treatment or comparison sites in respondents' perceived frequency of police activity (Figure 105). Treatment site respondents were slightly less likely to say they saw the police every day and slightly more likely to say they saw them a few times a week in the follow-up survey compared to the baseline survey. However, the findings for police satisfaction and legitimacy are very interesting. While satisfaction with the police was slightly higher in the treatment sites than the comparison sites in both waves, there was a 6 percent increase in the number of respondents reporting that they were satisfied with the police in the treatment sites, compared to a 1 percent decrease in the comparison sites. Furthermore, 10 percent fewer respondents in the follow-up period said they were not satisfied with police in the treatment sites compared with baseline (Figure 106). The findings for police legitimacy are very similar. Perceptions of legitimacy decreased slightly in the comparison sites between baseline and follow-up, but increased by 6 percentage points in the treatment sites.

5. Conclusions

The ABSPY initiative delivered a community-led, place-based, data-driven approach to reducing crime and public safety in five hot spots of juvenile and youth crime in the Rainier Beach neighborhood of Seattle. Over the four years since the program was first awarded federal funding by the Bureau of Justice Assistance, ABSPY has enhanced capacity among an extensive network of community members, local stakeholders, and local government and police agencies to work together to identify crime problems and develop innovative, evidence-informed responses.

As we have described, ABSPY is a complex intervention with many moving parts, intermittent breaks in activities, and variable levels of application at the different locations and at different times of the year. As a result, it was extremely challenging to evaluate the program and it is difficult to say conclusively whether or not it "worked." The rolling start and multifaceted nature of the interventions did not lend themselves to conventional analytic strategies that rely on a clear division between "pre" and "post" intervention periods. We also faced other statistical limitations—in particular, the low absolute numbers of crime outcomes in the hot spots. It is difficult to detect statistical significance when assessing rare events, and crime rates in the hot spots were susceptible to large fluctuations on a month-by-month basis, which—as we noted above—can skew the estimates of our models. There are also a number of unmeasured factors that influence crime rates at the hot spots that are not captured in our models. The amount of variance explained by each of our statistical models was extremely low in most cases, suggesting that ABSPY was just one of a multitude of other factors that shape patterns of crime and behavior at each location. Furthermore, complex interventions like ABSPY can take years to show strong effects, especially when they are implemented in communities that are already facing significant challenges. For example, the well-known evidence-based Communities That Care framework only showed statistically significant results after three years of full implementation. Given that ABSPY only reached full implementation in June 2016, we may see the promising findings strengthen after three or four more years of implementation.

Across almost all of the crime outcomes we examined, there was a decline in the rate in the hot spots, but also a larger corresponding decline in the comparison areas. As we discussed in the previous section, this meant our statistical models indicated that the treatment hot spots had higher rates of crime than the comparison areas, but it does not mean ABSPY did not work or that crime increased in the treatment areas. As we have noted, crime has been consistently falling across the neighborhood and the entire South Precinct during the evaluation period at a higher rate than in the city as a whole. The hot spots we selected for the ABSPY intervention had experienced higher concentrations of crime than most other street segments in the precinct for a number of years, and the neighborhood character and dynamics are unique in the city—from the diversity of the community to the concentration of multiple schools in the same area at the Rainier Beach campus to the history and culture of the place. Thus, we knew from the outset that it would be difficult to find adequate comparison sites. A number of our analyses revealed that the individual comparison sites were generally not well-matched to their Rainier Beach counterparts.

In addition to the unique nature of Rainier Beach, there has been a significant amount of gentrification in other areas of the South Precinct during the evaluation period, including in our comparison hot spots. For example, the comparison site for the Light Rail is now a hub of residential and retail activity, with new apartment complexes and restaurants that have been built even since we started the ABPSY initiative. Gentrification and revitalization efforts have been moving south along the Light Rail line from the northernmost part of the South Precinct, but have not yet reached Rainier Beach (there is also a strong

feeling within the Rainier Beach community that while the economic revitalization that other parts of the South Precinct have seen would be welcomed there, this should not come at the expense of long-term residents or businesses who could be forced out by increased property values or cultural change).

One limitation of our evaluation was that we only used data from 2012 to identify our hot spots. Thus, we did not do a good job of capturing all of these changes or the declining trends in crime. Even though the locations of the Rainier Beach hot spots reflected known long-term crime attractors and were validated by the community, some of the blocks appear to have cooled over the years, and this has happened to an even greater extent in the hot spots we identified as comparison sites. We recommend that researchers who intend to use hot spots analysis to support communities or police in identifying locations for intervention avoid these limitations by employing longer-term methods such as group-based trajectory analysis (e.g. Gill, Wooditch, & Weisburd, 2016; Weisburd et al., 2004) to assess not only where crime is most concentrated, but how crime trends at those places are changing over time. For example, which street segments are hot but cooling? Which places have increasing crime trends as a result of changes in population and land use?

The dosage and intensity of the interventions presented further challenges for our analysis. The rolling start to the interventions, the breaks in interventions (whether intended or enforced as a result of contracting problems), and the length of time it took to bring the more complex changes such as CPTED improvements to fruition means that there may not have been sufficient time for the impacts of the intervention to take hold. For example, while our analysis shows that the CPTED interventions were associated with significantly higher rates of crime incidents, these interventions only began in the last two months of the evaluation period. Across a 68-month period it is impossible to conclude that these changes were related to CPTED. Furthermore, many of our interventions involved building collective efficacy and capacity for crime prevention over time—they were not activities that could be expected to have an immediate effect on crime. We do not know how many Corner Greeter events or connections with business owners it takes to have an effect on crime, or how frequently and for how long they need to occur. Some of our interventions were also more "visible" than others, which could also impact how they affect crime. For example, Safe Passage, which put friendly faces in bright blue jackets on the streets every day, could be expected to have a larger impact on community perceptions of safety or on guardianship at the hot spots than the extensive behind-the-scenes planning that went into developing the CPTED interventions. It is positive that the City of Seattle has provided support for ABSPY beyond the federal funding period, as discussed below. This will allow us to monitor additional developments in the program and give us a longer follow-up period to assess whether any more positive effects can be detected in the longer term.

Related to these issues, we believe that it simply takes a very long time to produce real change in a neighborhood—especially in places within a neighborhood that have been entrenched hot spots for many years, even decades, and have not enjoyed an influx of resources or capacity-building efforts among residents. This is a constraint of all research and evaluation efforts, especially those supported by grant funding. Even longer-term grants like BCJI still do not allow sufficient time to address the complex set of risk factors and local conditions that drive crime—even in a "micro-place"—or to develop and implement tailored interventions with sufficient time to conduct a meaningful evaluation. We have really only been able to scratch the surface.

There are certainly a number of promising findings in our evaluation. Calls for service have increased in the treatment hot spots even as more survey respondents reported that they believed crime had declined in the past year. Coupled with small improvements in social cohesion and collective efficacy, and improved perceptions of the police, this suggests that residents in Rainier Beach may be more willing to

take action and call the police when crime problems arise. The hot spots saw greater declines in serious violent crime than the overall neighborhood or the South Precinct, and at Safeway serious violent crime declined even as calls for service and lower-level crime incidents increased, suggesting that improvements to place management are driving increased attention to disorder and quality-of-life issues that can lead to more serious problems. And there have been some positive preliminary impacts of ABSPY's business engagement efforts, which engage the people who live and work at the hot spots on a daily basis to both take responsibility for crime and take steps to improve their businesses and community in the longer term. The community survey also revealed high levels of satisfaction with the core interventions of ABSPY—the Corner Greeters, business engagement, and Safe Passage. Safe Passage in particular had a 90 percent satisfaction rate among those treatment group survey respondents who were aware of the program.

Having spent time in Rainier Beach it is also clear that there have been many other positive changes over the last few years that are difficult to quantify even in a community survey. Examples include increased engagement and activism among students at Rainier Beach High School (in one example, school students campaigned to the City Council on issues of "transit justice" and persuaded council members to provide free transportation for students using public transit to get to school), community volunteerism through clean-ups and revitalization efforts, and the way the community rallied around a beloved local business owner who was the victim of a violent crime. The capacity-building efforts of ABSPY have created sustainable partnerships between service providers, government agencies, and police that did not exist before. These partnerships are also meaningful—for example, the development of the Core Team means that there is now a dedicated group of people that is empowered by the community to take advantage of funding and other opportunities for neighborhood improvements, to respond creatively to problems (such as implementing restorative justice responses to significant crimes in the hot spots), or to campaign against political or policing changes that could disadvantage Rainier Beach residents. Thus, while ABSPY may not have had enough time to make significant changes to crime rates, it has sown the seeds of positive change in the community and residents are taking note. Evidence of the increased effectiveness of partnerships established or strengthened through the ABSPY effort includes the increased number, frequency, and scale of collaborative community events to "activate" or improve the hot spots (for example, the Bridge-to-Beach Community Clean Up, the Rainier Beach Arts and Culture Festival or BAAMFest, the Back2School Bash, Boo Fest, and BIG Night Out). These events drew hundreds of people from the local and surrounding communities to celebrate and improve their neighborhood.

The findings of our community survey about the potential impacts of ABSPY on satisfaction and police legitimacy are particularly interesting. Despite much lower crime rates and gentrification/revitalization efforts in the comparison areas, satisfaction with and perceived legitimacy of the police fell slightly in those areas while small improvements were observed in the treatment sites. What makes these changes even more striking is that the surveys were conducted during a period of great turmoil in policing both locally and nationally. The first wave of the survey was completed just a month before the police-involved shooting in Ferguson, MO, while the second wave was conducted in the summer of 2016 at a time when police shootings, racial inequality in policing, and the Black Lives Matter movement were at the forefront of the nation's political agenda. In Seattle, the Police Department entered into a consent decree with the Department of Justice related to excessive use of force (particularly as it related to minority communities) in 2012, just as the BCJI grant for ABSPY was awarded. This preceded a period of intense change and instability in SPD. During ABSPY's short existence there have been four police chiefs and eight South Precinct commanders. For all of these local and national changes to coincide with an improvement in resident perceptions of the police in a highly diverse neighborhood that has not historically had a good relationship with the police is remarkable. It is especially meaningful because while the police were at the

table in the ABSPY process, they did not lead it. The positive relationship between ABSPY and SPD did not develop immediately and took a great deal of perseverance, a number of false starts, and the willingness of one precinct captain in particular to engage with the team and encourage his officers to do the same. However, SPD eventually took their lead from the community and the ABSPY Core Team in reaching out to residents and businesses and trying to improve their relationship with youth. The current command staff and the South Precinct community policing team have been actively involved in the Core Team and have made an effort to provide a continuous presence as much as possible despite all the administrative changes.

Gill, Weisburd, Telep, Vitter, and Bennett (2014) proposed a "logic model" for community policing which starts with police officers working to build relationships with community members—especially in locations where relationships between the police and the community do not already exist—and helping residents to connect with each other in order to build collective efficacy. Once these relationships have developed, community members should be empowered to work with the police on problem-solving efforts. They describe problem-solving as the "tactical" element of community policing (see Cordner, 1999) that could ultimately lead to longer-term impacts on crime. ABSPY suggests that the responsibility for starting this process does not necessarily have to fall to the police. Community members can start the process of building trust, social cohesion, and collective efficacy between themselves and with social and government institutions, including the police. This allows the community to draw on needed resources from a range of providers rather than relying solely on the police to identify and solve problems. This empowerment of the community could in itself have a protective effect on future crime. Existing academic literature on community policing notes that it makes sense for the police to lead public safety efforts, given the range of tools and powers they have at their disposal to stabilize places and bring resources to deal with problems (e.g. Trojanowicz & Bucqueroux, 1994). But ultimately the police cannot make all of the changes on their own, even if they are in charge of the process, and especially if there is still work to be done to gain the trust of the community. This is where the ABSPY approach provides real strength. At the beginning of the BCJI grant period we were concerned that a community-led problem solving process would lack the structure and hierarchy of a police department. In fact ABSPY, which has balanced flexibility with strength and stability that contrasts substantially with all the changes in SPD, has successfully built capacity by drawing upon multiple areas of expertise, enabling authentic community engagement, and developing a core group of stakeholders that can provide support, information, and encouragement to other key agencies like the police even when those agencies are facing barriers to long-term participation.

In conclusion, ABSPY needs more time to reap the benefits of the stable, dedicated group of community stakeholders that has come together around the initiative. Going forward, the key priorities for the program should be to continue seeking opportunities for sustainability, ensure that interventions are implemented with adequate dosage and intensity at the hot spots, and follow up on evaluation efforts in an attempt to better distinguish any causal effects of the program.

The Core Team has focused on the sustainability of ABSPY beyond the federal funding (which ends in September 2016) since the early stages of the planning process. In 2015 the team developed a successful proposal to the Seattle City Council to request continued funding for project coordination, implementation, and research activities through 2016, and subsequent requests have resulted in City support through 2018. The positive community feedback and commitment of the ABSPY partners, including in-kind matching from the Core Team and implementation partners, helped make the case for the proposal.

Our original BCJI proposal also called specifically for capacity building within SPD, to institutionalize the

process of hot spot crime analysis and targeted problem solving. In line with BCJI requirements, ABSPY has always been a heavily data-driven process, both in the planning and the implementation phases. However, this process has relied on the research partners, who manipulate monthly downloads provided by SPD to provide information on each hot spot. As noted elsewhere in this report, the procedures used by the research partners do not (and cannot) always reflect standard SPD practice. Independent of ABSPY, SPD has focused its efforts over the last few years on building its crime analysis and data-driven capacities, giving us an opportunity to transfer knowledge generated from the ABSPY efforts to the police department. CEBCP collaborated with national experts in crime analysis to develop a training program for SPD analysts on hot spot identification and mapping methods, which was delivered in May 2016. This was followed by a second training session for command staff, delivered in September 2016, which focused on the strategic importance of crime analysis and problem solving efforts at micro-geographic places.

The capacity ABSPY has built between local government and community partners has also allowed Core Team members to identify additional funding opportunities to extend and/or expand upon the strong network of partnerships and interventions in Rainier Beach. In particular, the City of Seattle has partnered with Seattle Public Schools and the community at the Rainier Beach campus on an initiative called *Rainier Beach: Beautiful!*, which is funded by a one-year grant from the U.S. Department of Justice, Office of Juvenile Justice and Delinquency Prevention. *Rainier Beach: Beautiful!* builds on the collective efficacy and youth engagement pieces of ABSPY as well as encouraging positive compliance with policies and rules through an approach called Positive Behavioral Interventions and Supports (PBIS). PBIS is an evidence-based framework from the education field that aims to improve school climate and student outcomes by setting school-wide expectations for positive behavior and offering a tiered support system to respond to violations in a way that reflects the level of need of the particular student (e.g. Bradshaw, Mitchell, & Leaf, 2010; Horner & Sugai, 2015; Horner, Sugai, & Anderson, 2010; Horner, Sugai, & Lewis, 2015; Horner et al., 2009; Sugai & Horner, 2006). *Rainier Beach: Beautiful!* provides PBIS training and development support to both school staff and community stakeholders in the five schools on the Rainier Beach campus and in other community institutions that provide services and support for youth, including the Rainier Beach Community Center, the Rainier Beach Public Library, Seattle Parks and Recreation, SPD, the Boys and Girls Club of King County, and the Rainier Beach Merchants' Association. The goal of the program is for these school and community partners to develop a set of behavioral expectations that would be shared and communicated across all of the organizations involved.

Building on the strengths of both ABSPY and *Rainier Beach: Beautiful!*, CEBCP, in collaboration with OCA, has also received a $3.8 million grant from the U.S. Department of Justice, National Institute of Justice to develop and evaluate a "campus safety continuum," which combines PBIS with restorative justice principles to both encourage positive behavior and provide supportive interventions to reduce problem behavior. Like *Rainier Beach: Beautiful!*, the "continuum" will set expectations and provide resources to support those expectations in both the schools and public spaces within the community. The Campus Safety Continuum initiative will begin in January 2017 with a one-year planning phase, followed by three years of implementation, evaluation, and sustainability planning. CEBCP looks forward to continuing to work with the Rainier Beach campus and community in their efforts to make Rainier Beach "A Beautiful Safe Place for Youth."

References

Berk, R. & MacDonald, J. M. (2008). Overdispersion and Poisson regression. *Journal of Quantitative Criminology*, *24*(3), 269–284. doi:10.1007/s10940-008-9048-4. arXiv: arXiv:1002.2562v1

Bowers, K. J. & Johnson, S. D. (2016). Situational crime prevention. In D. Weisburd, D. P. Farrington, & C. Gill (Eds.), *What works in crime prevention and rehabilitation: Lessons from systematic reviews* (pp. 111–135). New York, NY: Springer.

Bowers, K. J., Johnson, S. D., Guerette, R. T., Summers, L., & Poynton, S. (2011). Spatial displacement and diffusion of benefits among geographically focused policing initiatives: A meta-analytical review. *Journal of Experimental Criminology*, *7*(4), 347–374. doi:10.1007/s11292-011-9134-8

Bradshaw, C. P., Mitchell, M. M., & Leaf, P. J. (2010). Examining the effects of Schoolwide Positive Behavioral Interventions and Supports on student outcomes: Results from a randomized controlled effectiveness trial in elementary schools. *Journal of Positive Behavior Interventions*, *12*(3), 133–148. doi:10.1177/1098300709334798

Braga, A. A. & Bond, B. J. (2008). Policing crime and disorder hot spots: A randomized controlled trial. *Criminology*, *46*(3), 577–607. doi:10.1111/j.1745-9125.2008.00124.x

Braga, A. A., Papachristos, A. V., & Hureau, D. M. (2014). The effects of hot spots policing on crime: An updated systematic review and meta-analysis. *Justice Quarterly*, *31*(4), 633–663. doi:10.1080/07418825.2012.673632

Braga, A. A., Weisburd, D. L., Waring, E. J., Mazerolle, L. G., Spelman, W., & Gajewski, F. (1999). Problem-oriented policing in violent crime places: A randomized controlled experiment. *Criminology*, *37*(3), 541–580. doi:10.1111/j.1745-9125.1999.tb00496.x

Braithwaite, J. (1989). *Crime, shame and reintegration*. Cambridge, UK: Cambridge University Press.

Brantingham, P. & Brantingham, P. (1995). Criminality of place: Crime generators and crime attractors. *European Journal on Criminal Policy and Research*, *3*(3), 5–26. doi:10.1007/BF02242925

Bursik Jr., R. J. (1988). Social disorganization and theories of crime and delinquency: Problems and prospects. *Criminology*, *26*(4), 519–552. doi:10.1111/j.1745-9125.1988.tb00854.x

Clarke, R. V. (1983). Situational crime prevention: Its theoretical basis and practical scope. *Crime and Justice*, *4*(1983), 225–256. doi:10.1086/449090

Clarke, R. V. (1995). Situational crime prevention. *Crime and Justice*, *19*(1995), 91–150. Retrieved from http://www.jstor.org/stable/1147596

Cohen, L. E. & Felson, M. (1979). Social change and crime rate trends: A routine activity approach. *American Sociological Review*, *44*(4), 588–608. doi:10.2307/2094589

Cordner, G. W. (1999). Elements of community policing. In L. K. Gaines & G. W. Cordner (Eds.), *Policing perspectives: An anthology* (pp. 137–149). Los Angeles, CA: Roxbury.

Curman, A. S. N., Andresen, M. A., & Brantingham, P. J. (2015). Crime and place: A longitudinal examination of street segment patterns in Vancouver, BC. *Journal of Quantitative Criminology*, *31*(1), 127–147. doi:10.1007/s10940-014-9228-3

Eck, J. E. (1994). *Drug markets and drug places: A case-control study of the spatial structure of illicit drug dealing* (Doctoral dissertation, University of Maryland, College Park, College Park, MD).

Eck, J. E. & Wartell, J. (1999). *Reducing crime and drug dealing by improving place management: A randomized experiment*. Washington, DC: U.S. Department of Justice, National Institute of Corrections. Retrieved from https://www.ncjrs.gov/pdffiles/fs000235.pdf

Felson, M. (1986). Linking criminal choices, routine activities, informal control, and criminal outcomes. In D. B. Cornish & R. V. G. Clarke (Eds.), *The reasoning criminal: Rational choice perspectives on offending*. New York, NY: Springer-Verlag.

Felson, M. (1987). Routine activities and crime prevention in the developing metropolis. *Criminology*, *25*(4), 911–932. doi:10.1111/j.1745-9125.1987.tb00825.x

Felson, M. (2006). *Crime and nature*. Thousand Oaks, CA: Sage.

Felson, M. & Boba, R. (2010). *Crime and everyday life* (4th ed.). Thousand Oaks, CA: Sage.

Gill, C. (2016). Community interventions. In D. Weisburd, D. P. Farrington, & C. Gill (Eds.), *What works in crime prevention and rehabilitation: Lessons from systematic reviews* (pp. 77–109). New York, NY: Springer.

Gill, C., Vitter, Z., & Weisburd, D. (2015). *Identifying hot spots of juvenile offending: A guide for crime analysts*. Washington, DC: U.S. Department of Justice, Office of Community Oriented Policing Services. Retrieved from http://ric-zai-inc.com/ric.php?page=detail&id=COPS-P298

Gill, C., Weisburd, D., Telep, C. W., Vitter, Z., & Bennett, T. (2014). Community-oriented policing to reduce crime, disorder and fear and increase satisfaction and legitimacy among citizens: A systematic review. *Journal of Experimental Criminology*, *10*(4), 399–428. doi:10.1007/s11292-014-9210-y

Gill, C., Wooditch, A., & Weisburd, D. (2016). Testing the "law of crime concentration at place" in a suburban setting: Implications for research and practice. *Journal of Quantitative Criminology*. doi:10.1007/s10940-016-9304-y

Goldstein, H. (1990). *Problem-oriented policing*. New York, NY: McGraw-Hill.

Gottfredson, D. C., Gottfredson, G. D., & Weisman, S. A. (2001). The timing of delinquent behavior and its implications for after-school programs. *Criminology & Public Policy*, *1*(1), 61–86. doi:10.1111/j.1745-9133.2001.tb00077.x

Greenwood, P. (2008). Prevention and intervention for juvenile offenders. *The Future of Children*, *18*(2), 185–206. Retrieved from http://futureofchildren.org/futureofchildren/publications/docs/18_02_09.pdf

Groff, E. R., Ratcliffe, J. H., Haberman, C. P., Sorg, E. T., Joyce, N. M., & Taylor, R. B. (2015). Does what police do at hot spots matter? The Philadelphia policing tactics experiment. *Criminology*, *53*(1), 23–53. doi:10.1111/1745-9125.12055

Guerette, R. T. & Bowers, K. J. (2009). Assessing the extent of crime displacement and diffusion of benefits: A review of situational crime prevention evaluations. *Criminology*, *47*(4), 1331–1368. doi:10.1111/j.1745-9125.2009.00177.x

Hawkins, J. D., Catalano, R. F., & Arthur, M. W. (2002). Promoting science-based prevention in communities. *Addictive Behaviors*, *27*(6), 951–976. doi:10.1016/S0306-4603(02)00298-8

Horner, R. H. & Sugai, G. (2015). School-wide PBIS: An example of applied behavior analysis implemented at a scale of social importance. *Behavior Analysis in Practice*, *8*(1), 80–85. doi:10.1007/s40617-015-0045-4

Horner, R. H., Sugai, G., & Anderson, C. M. (2010). Examining the evidence base for School-Wide Positive Behavior Support. *Focus on Exceptional Children*, *42*(8), 1–14.

Horner, R. H., Sugai, G., & Lewis, T. (2015). *Is School-Wide Positive Behavioral Interventions and Supports an evidence-based practice?* U.S. Department of Education, Office of Special Education Programs, Technical Assistance Center on Positive Behavioral Interventions and Supports. Washington, DC. Retrieved from https://www.pbis.org/research

Horner, R. H., Sugai, G., Smolkowski, K., Eber, L., Nakasato, J., Todd, A. W., & Esperanza, J. (2009). A randomized, wait-list controlled effectiveness trial assessing School-Wide Positive Behavior Support in elementary schools. *Journal of Positive Behavior Interventions*, *11*(3), 133–144. doi:10.1177/1098300709332067

Kondo, M. C., Keene, D., Hohl, B. C., MacDonald, J. M., & Branas, C. C. (2015). A difference-in-differences study of the effects of a new abandoned building remediation strategy on safety. *PLoS ONE*, *10*(7), e0129582. doi:10.1371/journal.pone.0129582

Kubrin, C. E. & Weitzer, R. (2003). New directions in social disorganization theory. *Journal of Research in Crime and Delinquency*, *40*(4), 374–402. doi:10.1177/0022427803256238

Lipsey, M. W. (2009). The primary factors that characterize effective interventions with juvenile offenders: A meta-analytic overview. *Victims & Offenders*, *4*(2), 124–147. doi:10.1080/15564880802612573

Lowenkamp, C. T. & Latessa, E. J. (2004). *Understanding the risk principle: How and why correctional interventions can harm low-risk offenders. Topics in Community Corrections, 2004*. Washington, DC: U.S. Department of Justice, National Institute of Corrections. Retrieved from http://www.uc.edu/content/dam/uc/ccjr/docs/articles/ticc04_final_complete.pdf

Lum, C., Koper, C. S., & Telep, C. W. (2011). The evidence-based policing matrix. *Journal of Experimental Criminology*, *7*(1), 3–26. doi:10.1007/s11292-010-9108-2

Lundman, R. J. (1993). *Prevention and control of juvenile delinquency* (2nd ed.). New York, NY: Oxford University Press.

Mazerolle, L. G., Price, J. F., & Roehl, J. (2000). Civil remedies and drug control: A randomized field trial in Oakland, California. *Evaluation Review*, *24*(2), 212–241. doi:10.1177/0193841X0002400203

Mazerolle, L. & Ransley, J. (2005). *Third party policing*. Cambridge, UK: Cambridge University Press.

Osgood, D. W., Wilson, J. K., O'Malley, P. M., Bachman, J. G., & Johnston, L. D. (1996). Routine activities and individual deviant behavior. *American Sociological Review*, *61*(4), 635–655. doi:10.2307/2096397

Petrosino, A., Turpin-Petrosino, C., & Guckenburg, S. (2010). Formal system processing of juveniles: Effects on delinquency. A systematic review. *Campbell Systematic Reviews*, *6*(1), 1–88. doi:10.4073/csr.2010.1

Pierce, G. L., Spaar, S., & Briggs, L. R. (1988). *The character of police work: Strategic and tactical implications*. Boston, MA: Center for Applied Social Research, Northeastern University.

Ratcliffe, J. H., Taniguchi, T., Groff, E. R., & Wood, J. D. (2011). The Philadelphia Foot Patrol Experiment: A randomized controlled trial of police patrol effectiveness in violent crime hotspots. *Criminology*, *49*(3), 795–831. doi:10.1111/j.1745-9125.2011.00240.x

Roman, C. G. (2002). *Schools as generators of crime: Routine activities and the sociology of place* (Doctoral dissertation, American University, Washington, DC). Retrieved from https://www.ncjrs.gov/pdffiles1/nij/grants/201946.pdf

Roman, C. G. (2005). Routine activities of youth and neighborhood violence: Spatial modeling of place, time, and crime. In F. Wang (Ed.), *Geographic information systems and crime analysis* (pp. 293–310). Hershey, PA: Idea Group.

Sampson, R. J. & Groves, W. B. (1989). Community structure and crime: Testing social-disorganization theory. *American Journal of Sociology*, *94*(4), 774–802. doi:10.1086/229068

Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science*, *277*, 918–924. doi:10.1126/science.277.5328.918

Shaw, C. R. & McKay, H. D. (1942). *Juvenile delinquency in urban areas*. Chicago, IL: University of Chicago Press.

Shelden, R. G. (1999). *Detention Diversion Advocacy: An evaluation*. U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention. Washington, DC. Retrieved from http://www.cjcj.org/uploads/cjcj/documents/ojjdp_ddap.pdf

Sherman, L. W., Farrington, D. P., Welsh, B. C., & MacKenzie, D. L. (Eds.). (2006). *Evidence-based crime prevention* (Revised ed). New York, NY: Routledge.

Sherman, L. W., Gartin, P. R., & Buerger, M. E. (1989). Hot spots of predatory crime: Routine activities and the criminology of place. *Criminology*, *27*(1), 27–56. doi:10.1111/j.1745-9125.1989.tb00862.x

Sherman, L. W. & Weisburd, D. (1995). General deterrent effects of police patrol in crime "hot spots": A randomized, controlled trial. *Justice Quarterly*, *12*(4), 625–648. doi:10.1080/07418829500096221

Skogan, W. G. & Frydl, K. (Eds.). (2004). *Fairness and effectiveness in policing: The evidence*. National Academies Press.

Steinberg, L. (2008). A social neuroscience perspective on adolescent risk-taking. *Developmental Review*, *28*(1), 78–106. doi:10.1016/j.dr.2007.08.002. arXiv: NIHMS150003

Sugai, G. & Horner, R. H. (2006). A promising approach for expanding and sustaining School-Wide Positive Behavior Support. *School Psychology Review*, *35*(2), 245–259.

Taxman, F. S. & McEwen, T. (1997). Using geographical tools with interagency work groups to develop and implement crime control strategies. In D. Weisburd & T. McEwen (Eds.), *Crime mapping and crime prevention*. Monsey, NY: Criminal Justice Press.

Telep, C. W., Mitchell, R. J., & Weisburd, D. (2014). How much time should the police spend at crime hot spots? Answers from a police agency directed randomized field trial in Sacramento, California. *Justice Quarterly*, *31*(5), 905–933. doi:10.1080/07418825.2012.710645

Trojanowicz, R. C. & Bucqueroux, B. (1994). *Community policing: How to get started*. Cincinnati, OH: Anderson.

Weisburd, D. (2012). Bringing social context back into the equation: The importance of social characteristics of places in the prevention of crime. *Criminology & Public Policy*, *11*(2), 317–326. doi:10.1111/j.1745-9133.2012.00810.x

Weisburd, D. (2015). The law of crime concentration and the criminology of place. *Criminology*, *53*(2), 133–157. doi:10.1111/1745-9125.12070

Weisburd, D. & Amram, S. (2014). The law of concentrations of crime at place: The case of Tel Aviv-Jaffa. *Police Practice and Research*, *15*(2), 101–114. doi:10.1080/15614263.2013.874169

Weisburd, D., Bushway, S., Lum, C., & Yang, S.-M. (2004). Trajectories of crime at places: A longitudinal study of street segments in the city of Seattle. *Criminology*, *42*(2), 283–322. doi:10.1111/j.1745-9125.2004.tb00521.x

Weisburd, D., Davis, M., & Gill, C. (2015). Increasing collective efficacy and social capital at crime hot spots: New crime control tools for police. *Policing*, *9*(3), 265–274. doi:10.1093/police/pav019

Weisburd, D. & Eck, J. E. (2004). What can police do to reduce crime, disorder, and fear? *The Annals of the American Academy of Political and Social Science*, *593*(1), 42–65. doi:10.1177/0002716203262548

Weisburd, D. & Green, L. (1995). Policing drug hot spots: The Jersey City Drug Market Analysis experiment. *Justice Quarterly*, *12*(4), 711–735. doi:10.1080/07418829500096261

Weisburd, D., Groff, E. R., & Yang, S.-M. (2012). *The criminology of place: Street segments and our understanding of the crime problem*. New York, NY: Oxford University Press.

Weisburd, D., Morris, N. A., & Groff, E. R. (2009). Hot spots of juvenile crime: A longitudinal study of arrest incidents at street segments in Seattle, Washington. *Journal of Quantitative Criminology*, *25*(4), 443–467. doi:10.1007/s10940-009-9075-9

Weisburd, D. & Telep, C. W. (2010). The efficiency of place-based policing. *Cahiers Politiestudies*, *4*(17), 247–262.

Weisburd, D., Telep, C. W., Hinkle, J. C., & Eck, J. E. (2010). Is problem-oriented policing effective in reducing crime and disorder? *Criminology & Public Policy*, *9*(1), 139–172. doi:10.1111/j.1745-9133.2010.00617.x

Weisburd, D., Wyckoff, L. A., Ready, J., Eck, J. E., Hinkle, J. C., & Gajewski, F. (2006). Does crime just move around the corner? A controlled study of spatial displacement and diffusion of crime control benefits. *Criminology*, *44*(3), 549–592. doi:10.1111/j.1745-9125.2006.00057.x

Welsh, B. C. & Farrington, D. P. (2008). Effects of improved street lighting on crime: A systematic review. *Campbell Systematic Reviews*, *4*(13), 1–46. doi:10.4073/csr.2008.13

Welsh, B. C., Mudge, M. E., & Farrington, D. P. (2010). Reconceptualizing public area surveillance and crime prevention: Security guards, place managers and defensible space. *Security Journal*, *23*(4), 299–319. doi:10.1057/sj.2008.22

Wilson, J. Q. & Kelling, G. L. (1982). Broken windows: The police and neighborhood safety. *Atlantic Monthly*, 1–9. Retrieved from http://www.theatlantic.com/magazine/archive/1982/03/broken-windows/4465/

Yang, E., Foster-Fishman, P., Collins, C., & Ahn, S. (2012). Testing a comprehensive community problem-solving framework for community coalitions. *Journal of Community Psychology*, *40*(6), 681–698. doi:10.1002/jcop.20526

Appendices

A. Tables

Table 1: Number of surveys collected in each site by wave

	Baseline	Follow-up
Treatment sites		
Rose St	27	32
Rainier & Henderson	37	30
Light Rail	25	31
Lake Washington	26	26
Safeway	31	35
Total	146	154
Comparison sites		
Rose St comparison	27	21
Rainier & Henderson comparison	42	26
Light Rail comparison	31	33
Lake Washington comparison	30	32
Safeway comparison	24	34
Total	154	146
Grand total	300	300

Table 2: Number of surveys collected by setting and wave

	Baseline	Follow-up
Treatment sites		
Household	27	21
Street	37	30
Business	42	26
Comparison sites		
Household	31	33
Street	26	26
Business	30	32

Setting was not recorded in 4 baseline surveys (1 treatment site and 3 comparison sites).

Table 3: Age of survey respondents, frequency and percentage by wave

	Baseline		Follow-up	
	Frequency	Percent	Frequency	Percent
Treatment sites				
18 to 25	34	28	38	25
26 to 35	31	25	24	16
36 to 45	22	18	25	16
46 to 55	14	11	26	17
56 to 65	17	14	31	20
66 to 75	4	3	4	3
Over 75	0	0	5	3
Comparison sites				
18 to 25	25	17	30	22
26 to 35	34	23	42	31
36 to 45	19	13	24	18
46 to 55	27	19	20	15
56 to 65	24	17	11	8
66 to 75	10	7	7	5
Over 75	6	4	2	1

Percentages based on valid responses.

Table 4: Gender of survey respondents, frequency and percentage by wave

	Baseline		Follow-up	
	Frequency	Percent	Frequency	Percent
Treatment sites				
Male	71	57	75	49
Female	54	43	78	51
Comparison sites				
Male	80	55	70	51
Female	64	44	65	48
Other	1	1	1	1

Percentages based on valid responses.

Table 5: Race of survey respondents, number by wave

	Baseline	Follow-up
Treatment sites		
Black/African American	57	61
African immigrant/refugee	13	23
White	22	37
Asian	12	10
Native American/Alaska Native	5	5
Native Hawaiian/Pacific Islander	5	5
Other	23	15
Comparison sites		
Black/African American	46	62
African immigrant/refugee	8	12
White	48	34
Asian	25	10
Native American/Alaska Native	2	6
Native Hawaiian/Pacific Islander	3	3
Other	12	14

Respondents could select multiple races. Some respondents who identified as mixed-race selected each category with which they identified, while others selected "other." A number of respondents selecting "other" identified as Hispanic.

Table 6: Survey respondents born in the United States, frequency and percentage by wave

	Baseline		Follow-up	
	Frequency	Percent	Frequency	Percent
Treatment sites				
Yes	75	60	102	67
No	49	40	50	33
Comparison sites				
Yes	96	65	104	75
No	52	35	35	25

Percentages based on valid responses.

Table 7: Survey respondents with children, number by wave

	Baseline	Follow-up
Treatment sites		
No children	56	54
Children under 18	43	58
Children age 18-25	11	22
Children over age 25	23	33
Comparison sites		
No children	61	58
Children under 18	36	55
Children age 18-25	24	12
Children over age 25	37	17

Respondents could select multiple categories.

Table 8: Education level of survey respondents, frequency and percentage by wave

	Baseline		Follow-up	
	Frequency	Percent	Frequency	Percent
Treatment sites				
Primary/elementary school	7	6	2	1
Some middle/high school	10	8	8	5
High school diploma	39	31	32	21
Some college	27	22	54	36
Associates degree	17	14	19	13
Bachelors degree	17	14	23	15
Masters/graduate/professional degree	8	6	13	9
Comparison sites				
Primary/elementary school	1	1	3	2
Some middle/high school	10	7	8	6
High school diploma	31	22	29	21
Some college	34	24	43	31
Associates degree	24	17	18	13
Bachelors degree	26	19	21	15
Masters/graduate/professional degree	14	10	16	12

Percentages based on valid responses.

Table 9: Employment status of survey respondents, number by wave

	Baseline		Follow-up	
	Frequency	Percent	Frequency	Percent
Treatment sites				
Full-time employment	46	32	62	42
Part-time employment	23	16	36	25
Retired	10	7	8	5
Not working	36	25	25	17
Other	0	0	7	5
Comparison sites				
Full-time employment	61	40	63	41
Part-time employment	24	16	33	21
Retired	15	10	21	14
Not working	37	24	30	19
Other	0	0	4	3

Percentages based on valid responses.

Table 10: Main activity of respondents at the hot spot, frequency and percentage by wave

	Baseline		Follow-up	
	Frequency	Percent	Frequency	Percent
Treatment sites				
Live	72	49	58	38
Work	25	17	15	10
Go to school	1	1	1	1
Own business	1	1	4	3
Own property/land	0	0	1	1
Shop	21	14	30	19
Use public transit	18	12	17	11
Use local resources	3	2	14	9
Walk or drive through	3	2	11	7
Other	2	1	2	1
Comparison sites				
Live	72	47	49	34
Work	15	10	15	10
Go to school	0	0	0	0
Own business	4	3	0	0
Own property/land	1	1	0	0
Shop	17	11	37	25
Use public transit	28	18	30	21
Use local resources	2	1	4	3
Walk or drive through	9	6	8	5
Other	6	4	3	2

Percentages based on valid responses.

Table 11: Differences in rates of calls for service associated with ABSPY, by site and intervention

	Difference in rate, treatment vs comparison	Direction of difference	Statistical significance
Combined sites	33%	higher	+++
Rose Street	9%	lower	no
Rainier and Henderson	21%	higher	+
Light Rail	16%	lower	no
Lake Washington	58%	higher	+++
Safeway	71%	higher	+++
Corner Greeters	26%	higher	++
Plaza activation	36%	higher	+++
Safe Passage/campus safety	12%	higher	no
Business engagement	55%	higher	+++
CPTED	2%	lower	no

$+ p \leq .05$ $++ p \leq .01$ $+++ p \leq .001$

Table 12: Differences in rates of crime incident reports associated with ABSPY, by site and intervention

	Difference in rate, treatment vs comparison	Direction of difference	Statistical significance
Combined sites	20%	higher	++
Rose Street	5%	higher	no
Rainier and Henderson	18%	higher	no
Light Rail	10%	lower	no
Lake Washington	26%	higher	no
Safeway	17%	higher	no
Corner Greeters	13%	higher	no
Plaza activation	30%	higher	no
Safe Passage/campus safety	12%	higher	no
Business engagement	7%	higher	no
CPTED	48%	higher	+

$+ p \leq .05$ $++ p \leq .01$ $+++ p \leq .001$

Table 13: Differences in rates of youth incidents associated with ABSPY, by site and intervention

	Difference in rate, treatment vs comparison	Direction of difference	Statistical significance
Combined sites	39%	higher	++
Rose Street	1%	higher	no
Rainier and Henderson	42%	higher	no
Light Rail	17%	higher	no
Lake Washington	273%	higher	+
Safeway	103%	higher	++
Corner Greeters	43%	higher	+
Plaza activation	138%	higher	+
Safe Passage/campus safety	12%	higher	no
Business engagement	1%	higher	no
CPTED	44%	higher	no

$+ p \leq .05$ $++ p \leq .01$ $+++ p \leq .001$

Table 14: Differences in rates of Part I violent crimes associated with ABSPY, by site and intervention

	Difference in rate, treatment vs comparison	Direction of difference	Statistical significance
Combined sites	23%	higher	no
Rose Street	33%	higher	no
Rainier and Henderson	68%	higher	no
Light Rail	22%	higher	no
Lake Washington	17%	higher	no
Safeway	44%	lower	no
Corner Greeters	18%	higher	no
Plaza activation	119%	higher	no
Safe Passage/campus safety	42%	higher	no
Business engagement	21%	lower	no
CPTED	47%	higher	no

$+ p \leq .05$ $++ p \leq .01$ $+++ p \leq .001$

Table 15: Differences in rates of Part I property crimes associated with ABSPY, by site and intervention

	Difference in rate, treatment vs comparison	Direction of difference	Statistical significance
Combined sites	9%	higher	no
Rose Street	29%	lower	no
Rainier and Henderson	19%	higher	no
Light Rail	20%	higher	no
Lake Washington	25%	lower	no
Safeway	3%	lower	no
Corner Greeters	1%	lower	no
Plaza activation	29%	higher	no
Safe Passage/campus safety	15%	higher	no
Business engagement	16%	lower	no
CPTED	7%	higher	no

$+ p \leq .05$ $++ p \leq .01$ $+++ p \leq .001$

Table 16: Differences in rates of violent crimes associated with ABSPY, by site and intervention

	Difference in rate, treatment vs comparison	Direction of difference	Statistical significance
Combined sites	19%	higher	no
Rose Street	25%	lower	no
Rainier and Henderson	52%	higher	no
Light Rail	47%	lower	no
Lake Washington	108%	higher	no
Safeway	29%	lower	no
Corner Greeters	8%	higher	no
Plaza activation	198%	higher	no
Safe Passage/campus safety	17%	higher	no
Business engagement	31%	lower	no
CPTED	7%	higher	no

$+ p \leq .05$ $++ p \leq .01$ $+++ p \leq .001$

Table 17: Differences in rates of Part II crimes associated with ABSPY, by site and intervention

	Difference in rate, treatment vs comparison	Direction of difference	Statistical significance
Combined sites	30%	higher	+
Rose Street	9%	higher	no
Rainier and Henderson	18%	higher	no
Light Rail	74%	lower	no
Lake Washington	116%	higher	+
Safeway	31%	higher	no
Corner Greeters	21%	higher	no
Plaza activation	125%	higher	marginal
Safe Passage/campus safety	1%	lower	no
Business engagement	30%	higher	no
CPTED	46%	higher	no

$+ p \leq .05$ $++ p \leq .01$ $+++ p \leq .001$

B. Figures

Figure 1: Hot spots of juvenile incidents, Seattle South Precinct, 2012

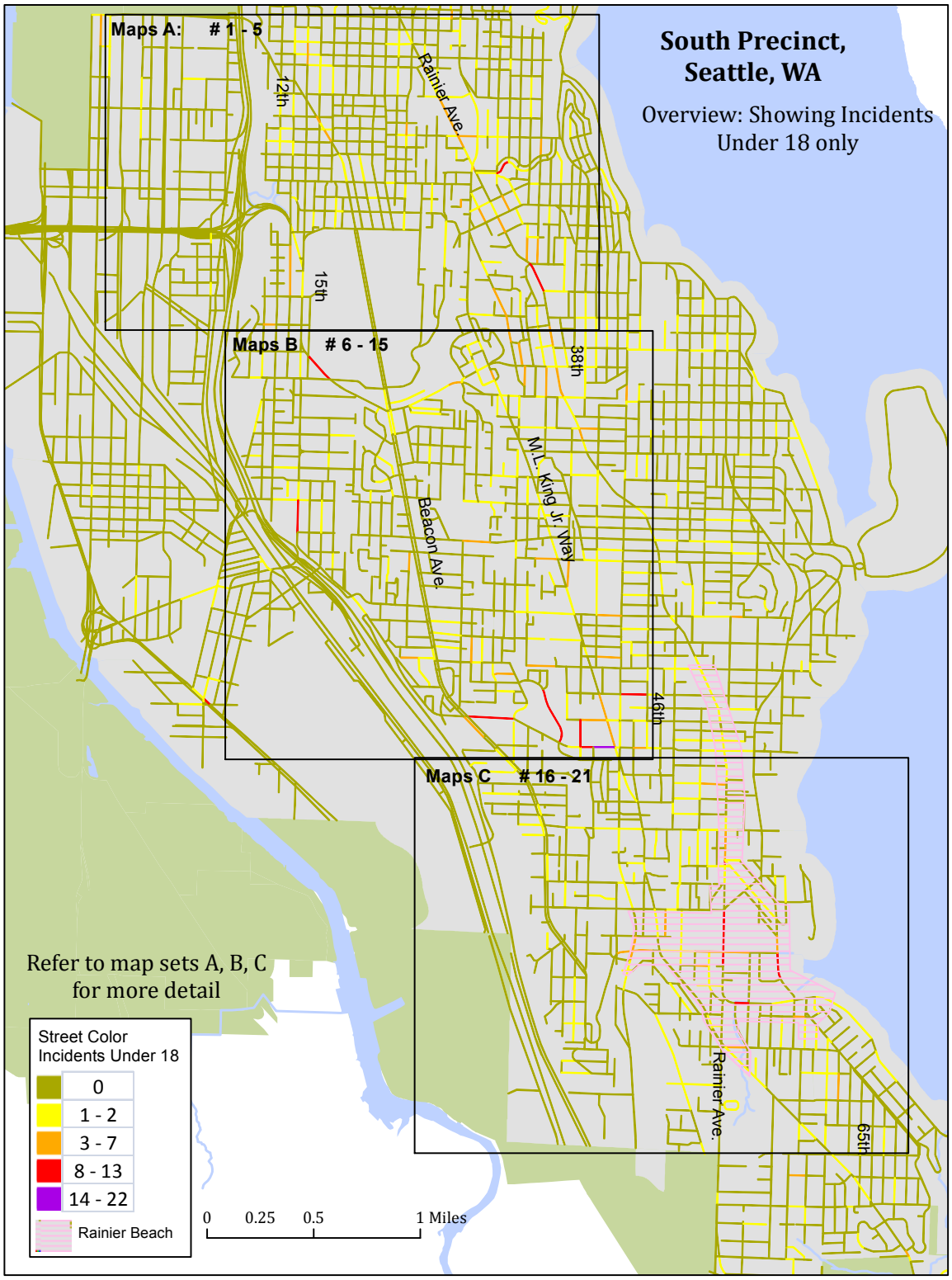


Figure 2: Hot spots of youth incidents, Seattle South Precinct, 2012

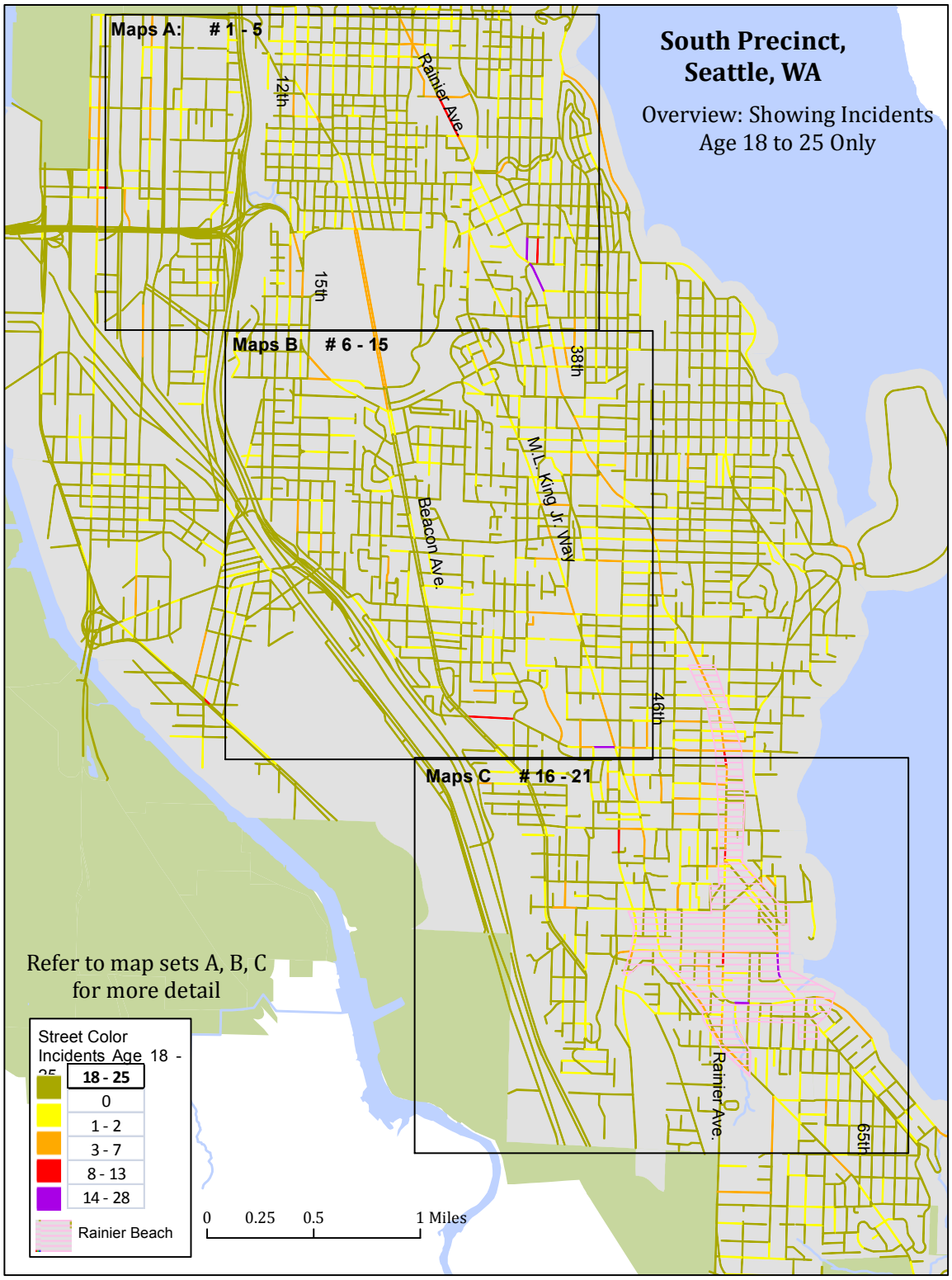


Figure 3: Hot spots of juvenile and youth incidents, Rainier Beach area, Seattle South Precinct, 2012

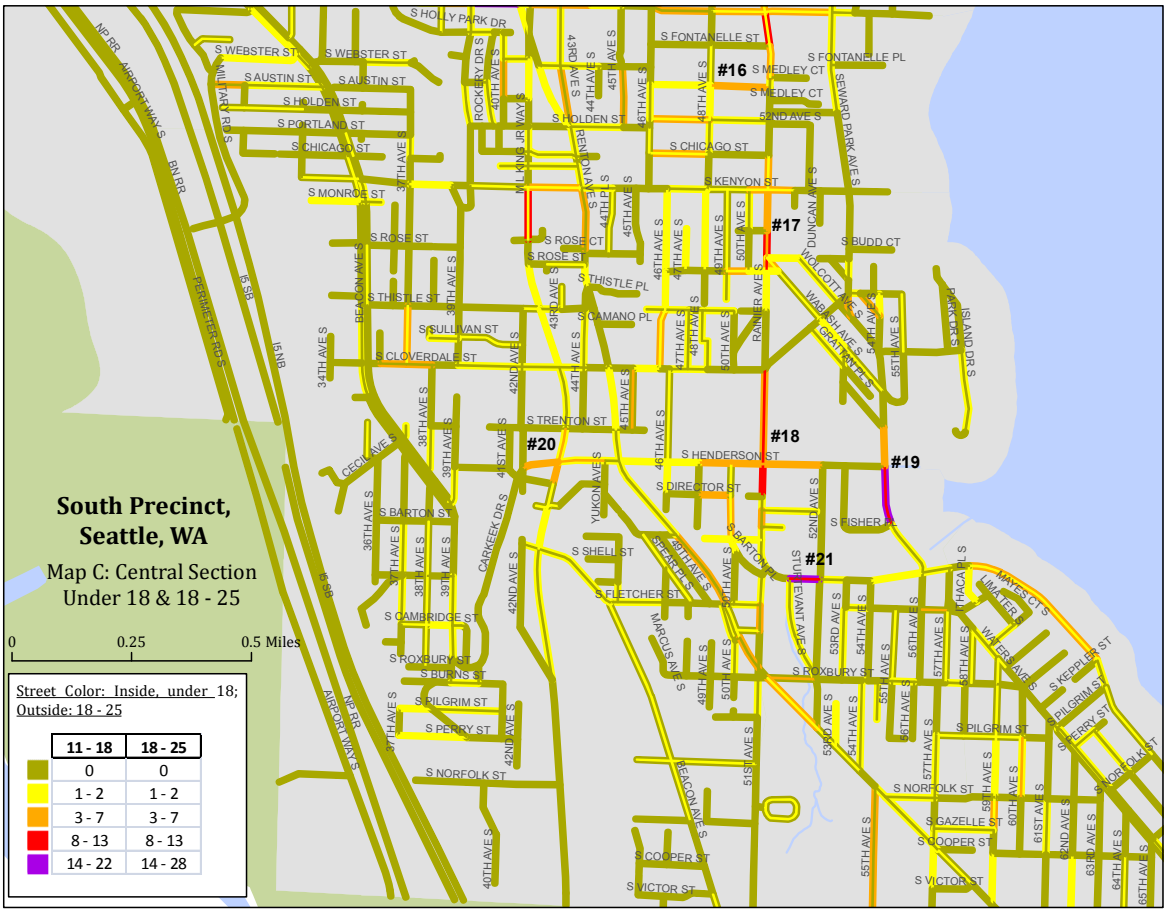


Figure 4: Target hot spots identified for intervention

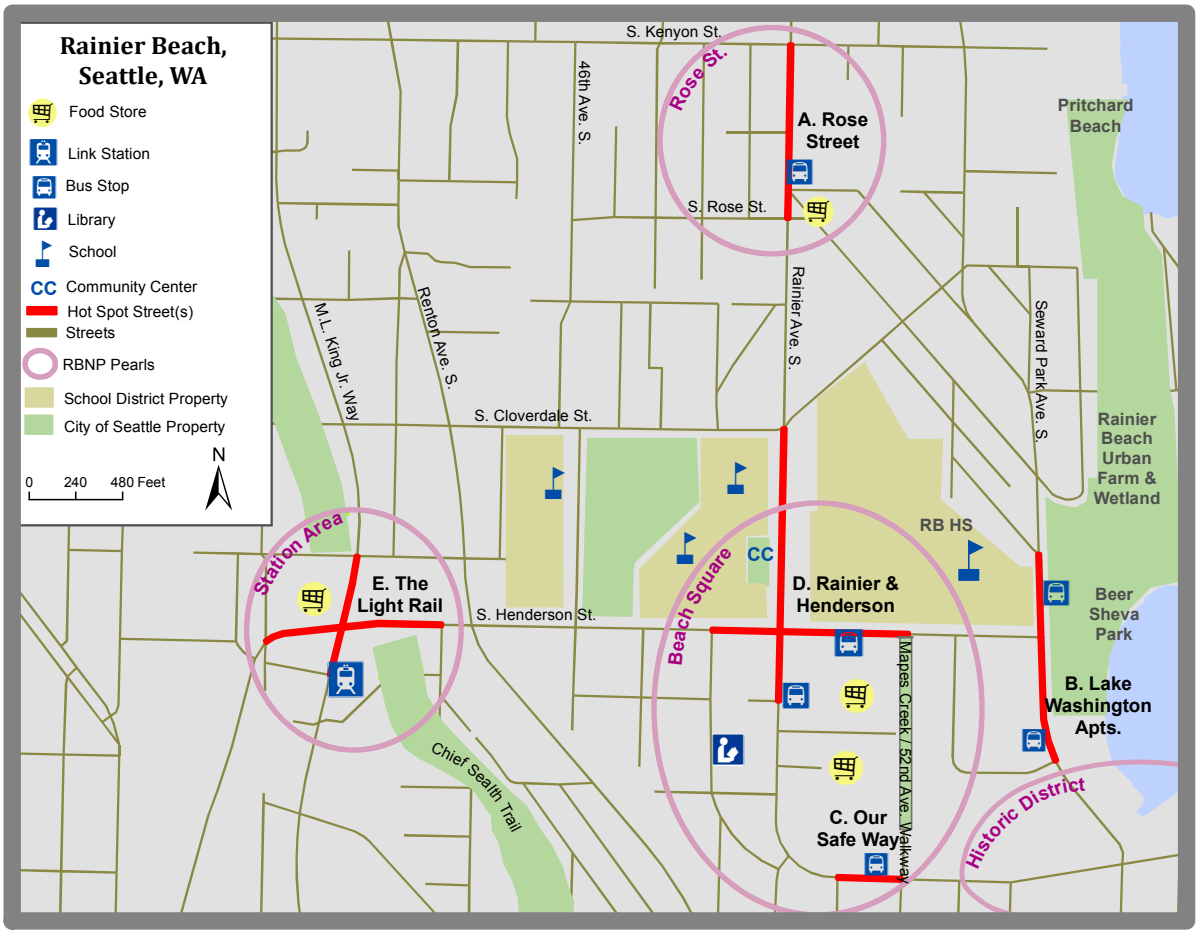


Figure 5: Community Appearance Index results, Rose Street, 2014

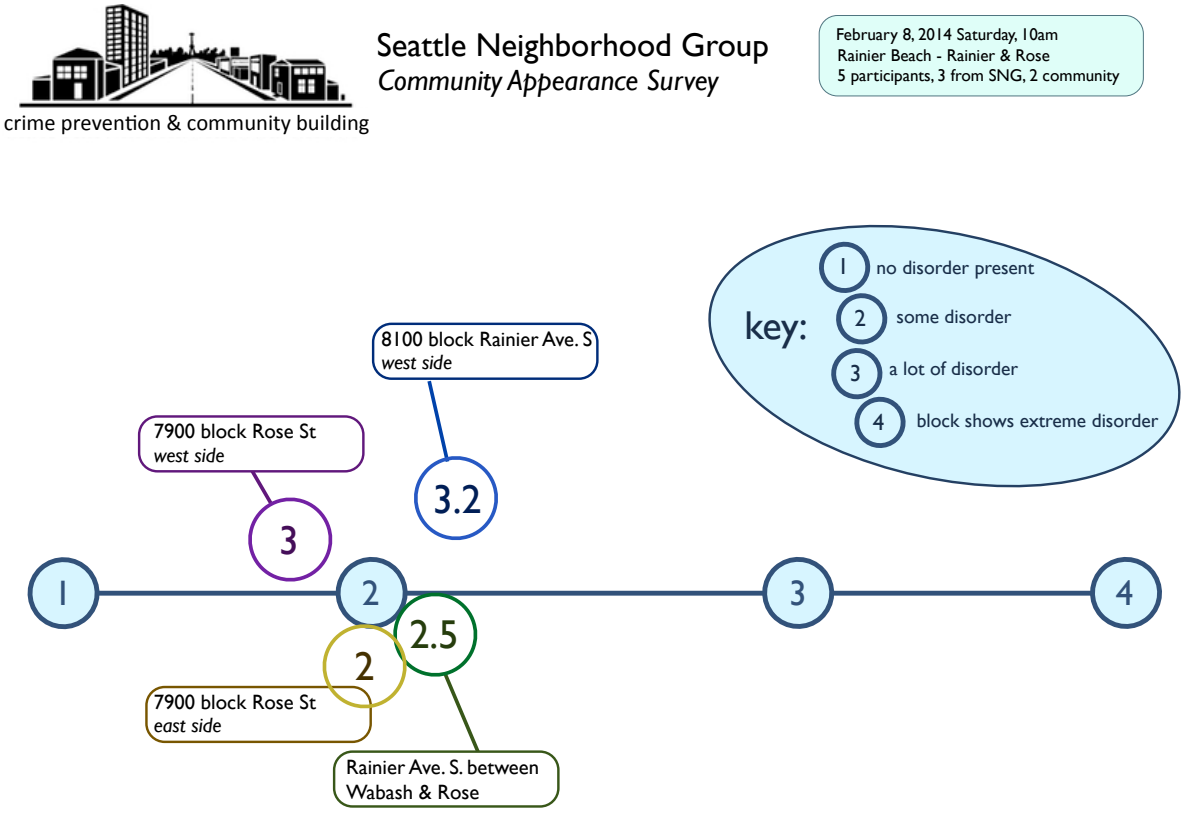


Figure 6: Community Appearance Index results, Rainier & Henderson (east side), 2014

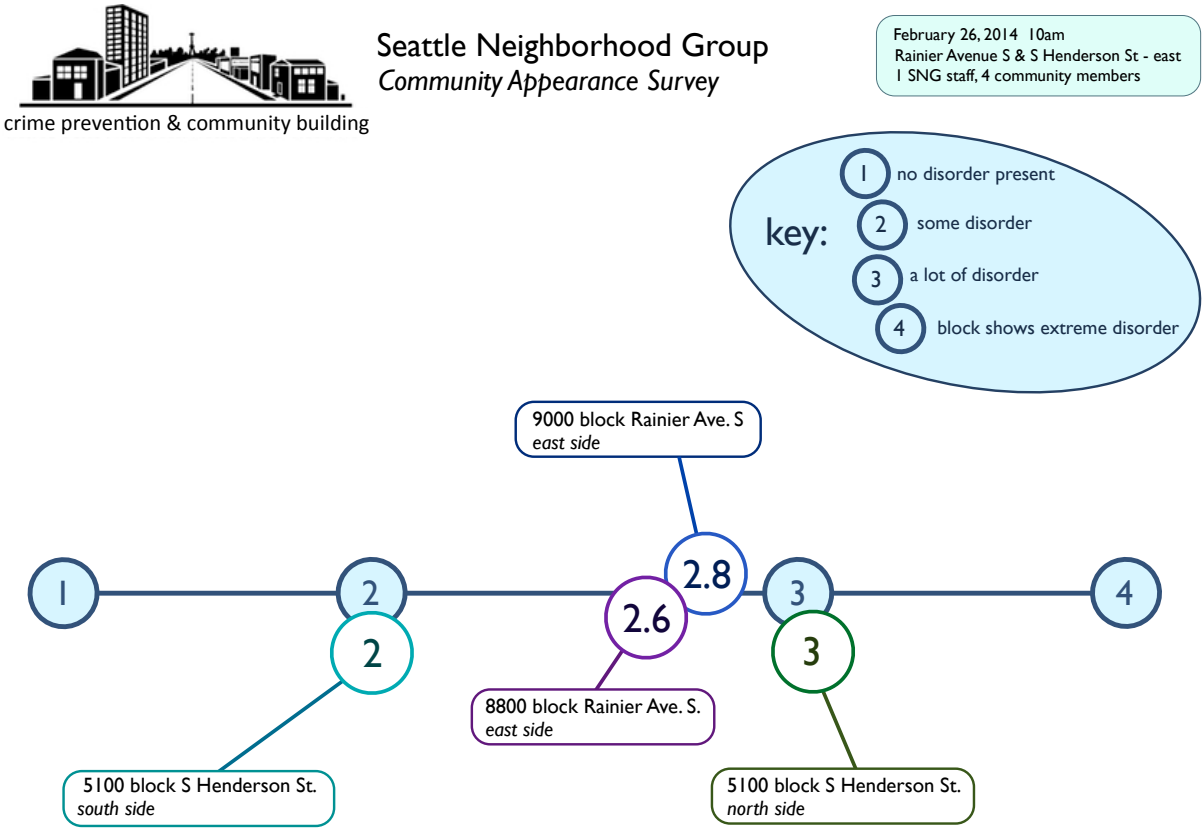


Figure 7: Community Appearance Index results, Rainier & Henderson (west side), 2014

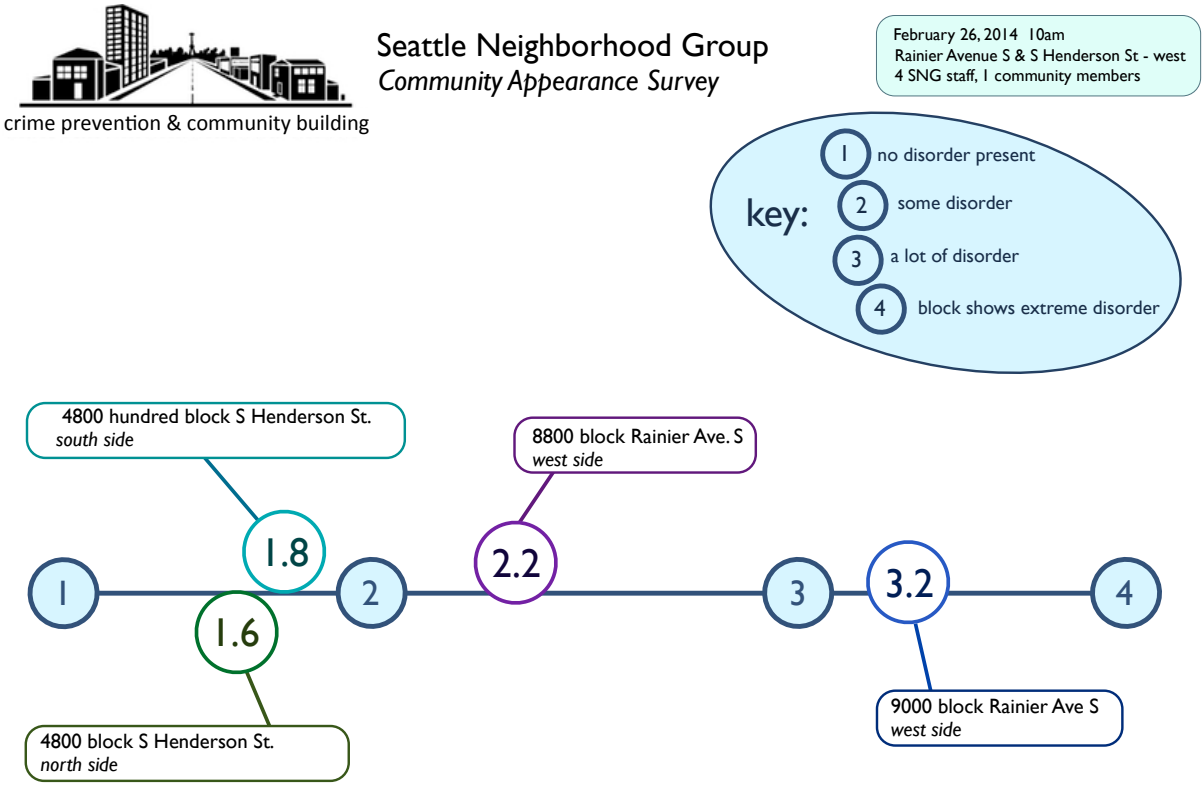


Figure 8: Community Appearance Index results, Light Rail (east side), 2014

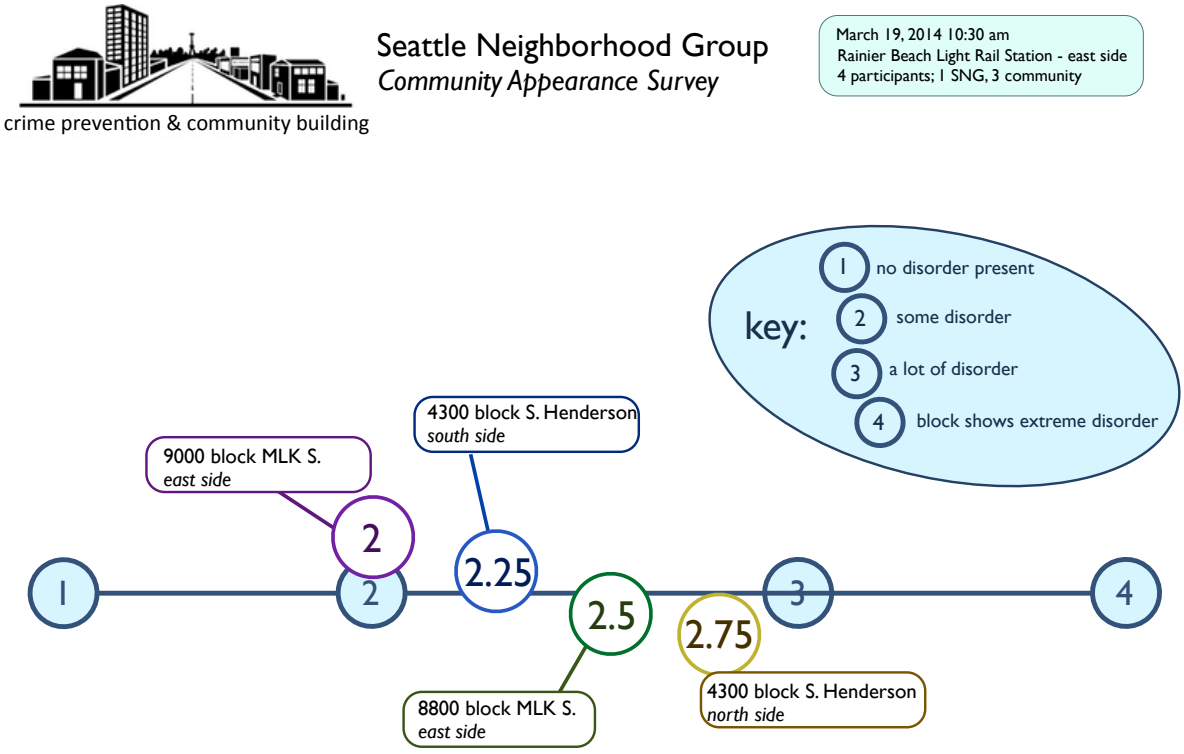


Figure 9: Community Appearance Index results, Light Rail (west side), 2014

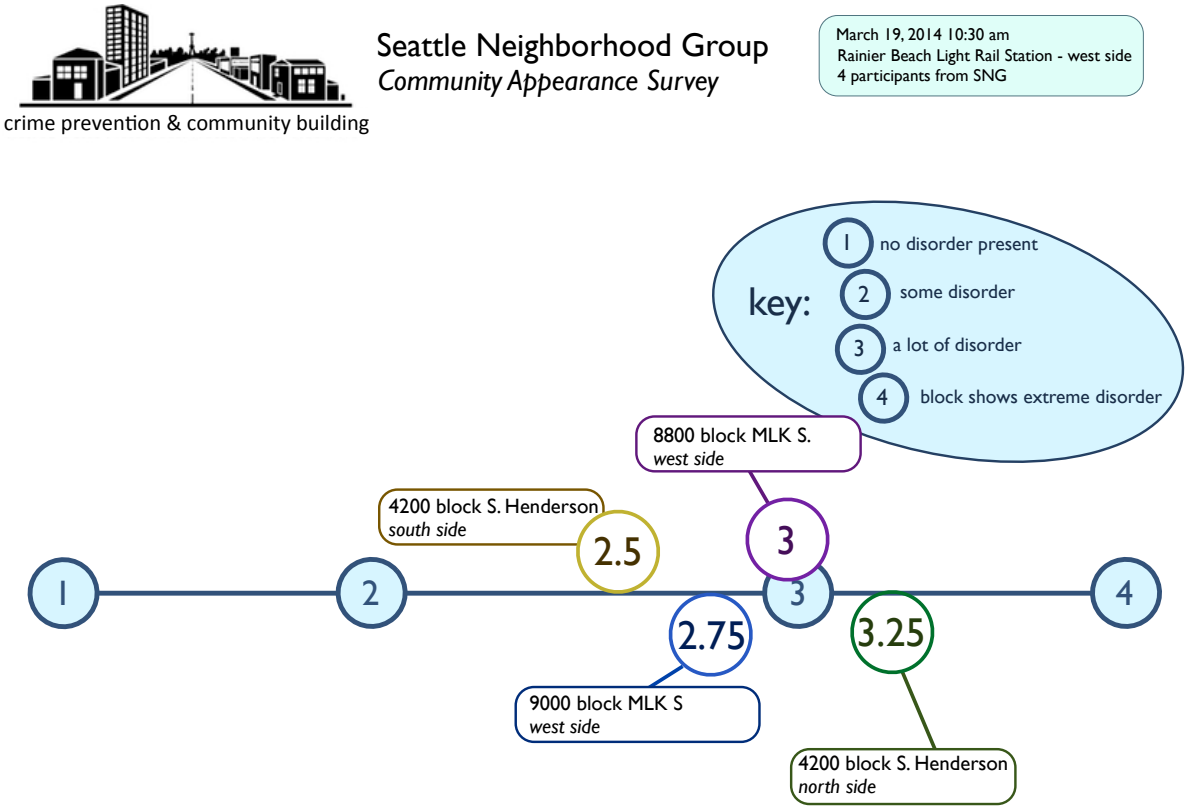


Figure 10: Community Appearance Index results, Lake Washington, 2014

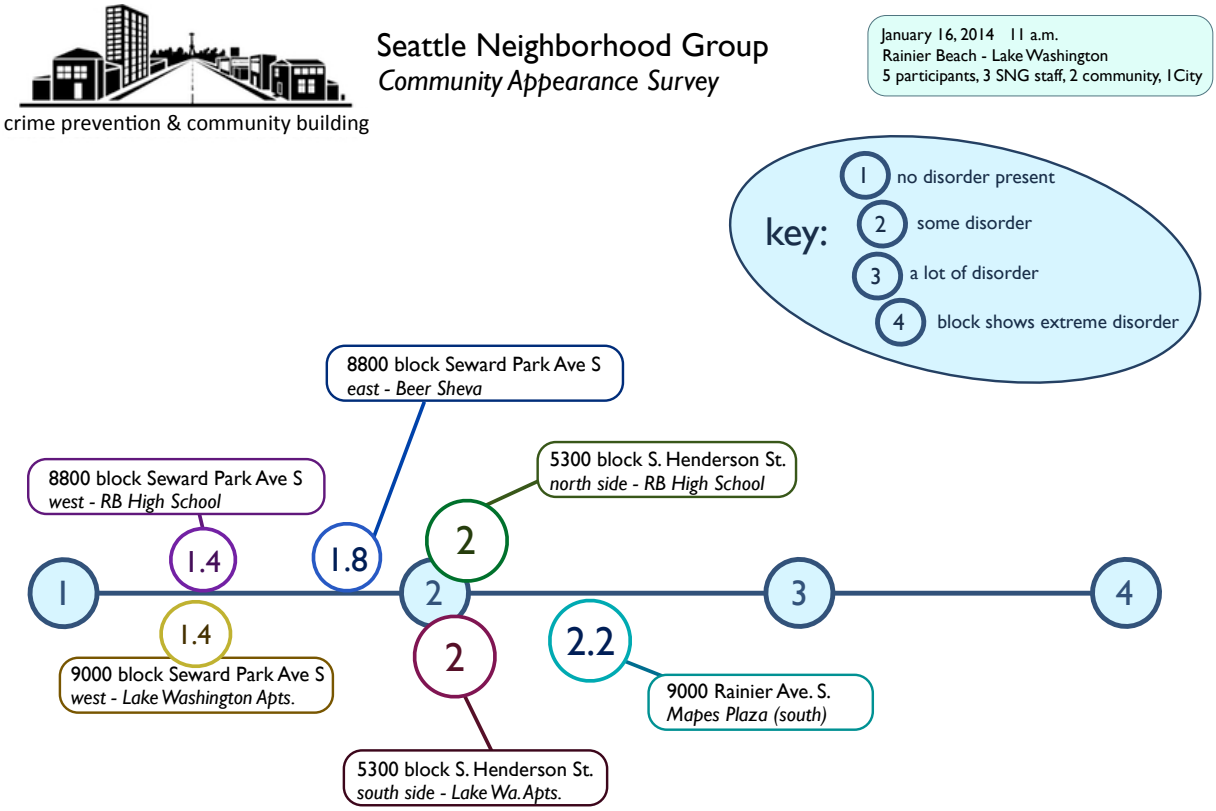


Figure 11: Community Appearance Index results, Safeway, 2014

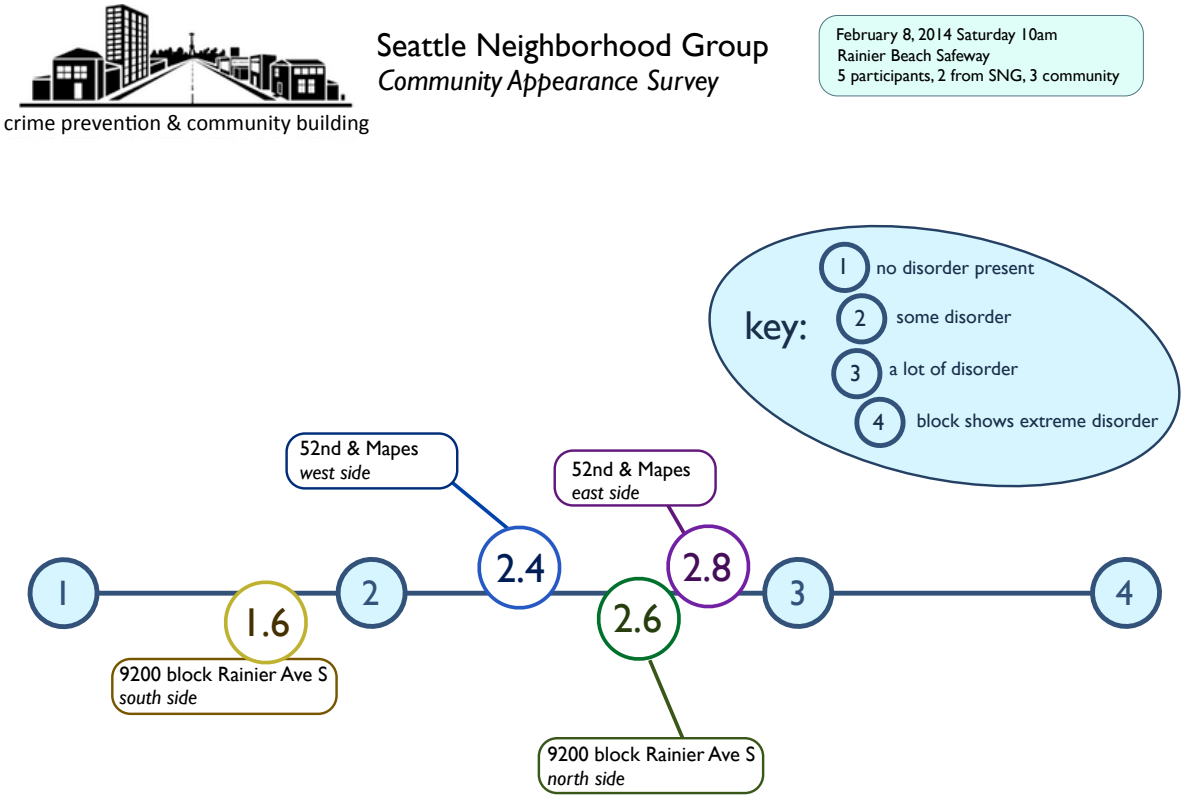


Figure 12: ABSPY implementation timeline, 2013-2014

Activities	Location	Planning Phase (BCJI)							Implementation Phase (BCJI)							
		2013			2014											
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Core Team Activities																
Preliminary data analysis																
"The Gathering"--implementation kick off event																
Planning and contracting																
Community Mobilization (includes Community Task Force, Campus Safety Team																
CTF training																
Interventions																
Corner Greeters	All															
Plaza activation	Rainier & Henderson															
Safe Passage	Rainier & Henderson															
Business Engagement	Rose St, Light Rail, Safeway															
CPTED storefront improvements	Rose St, Light Rail															

Figure 13: ABSPY implementation timeline, 2014-2016

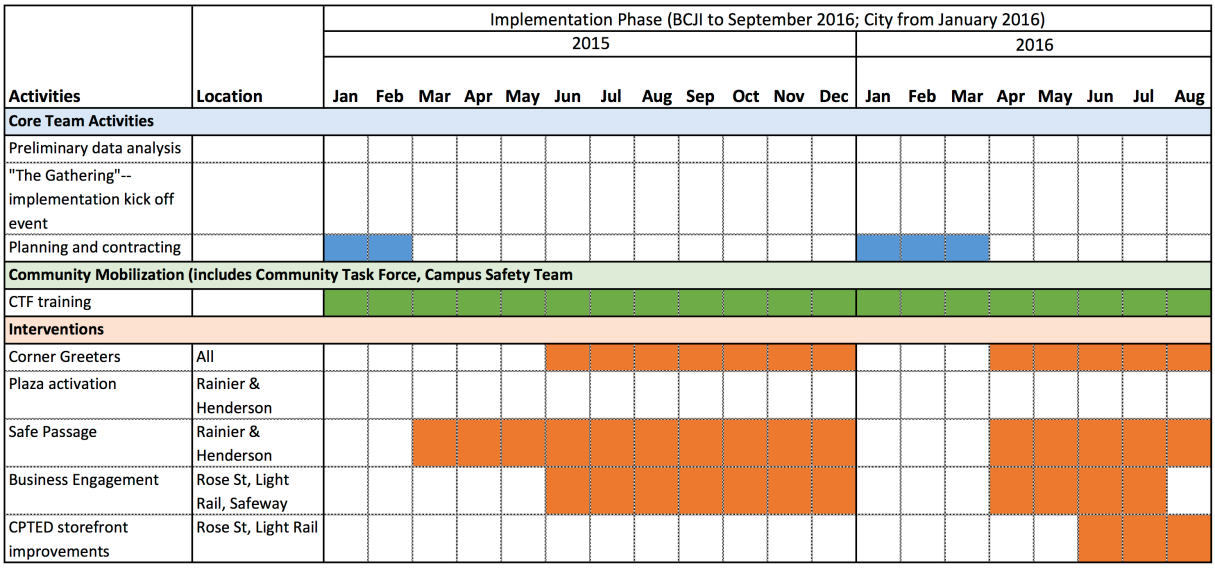


Figure 14: Calls for service in treatment and comparison sites, January 2011–August 2016

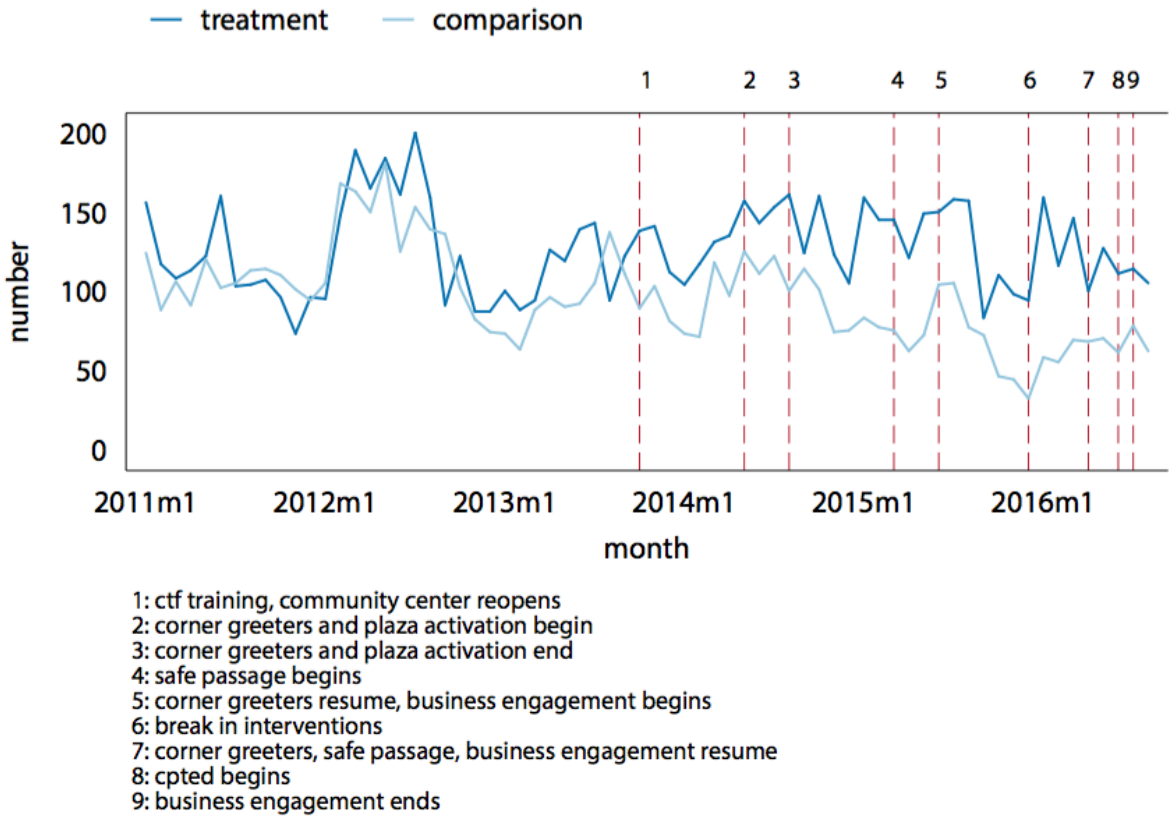


Figure 15: Calls for service at Rose Street and comparison site, January 2011–August 2016

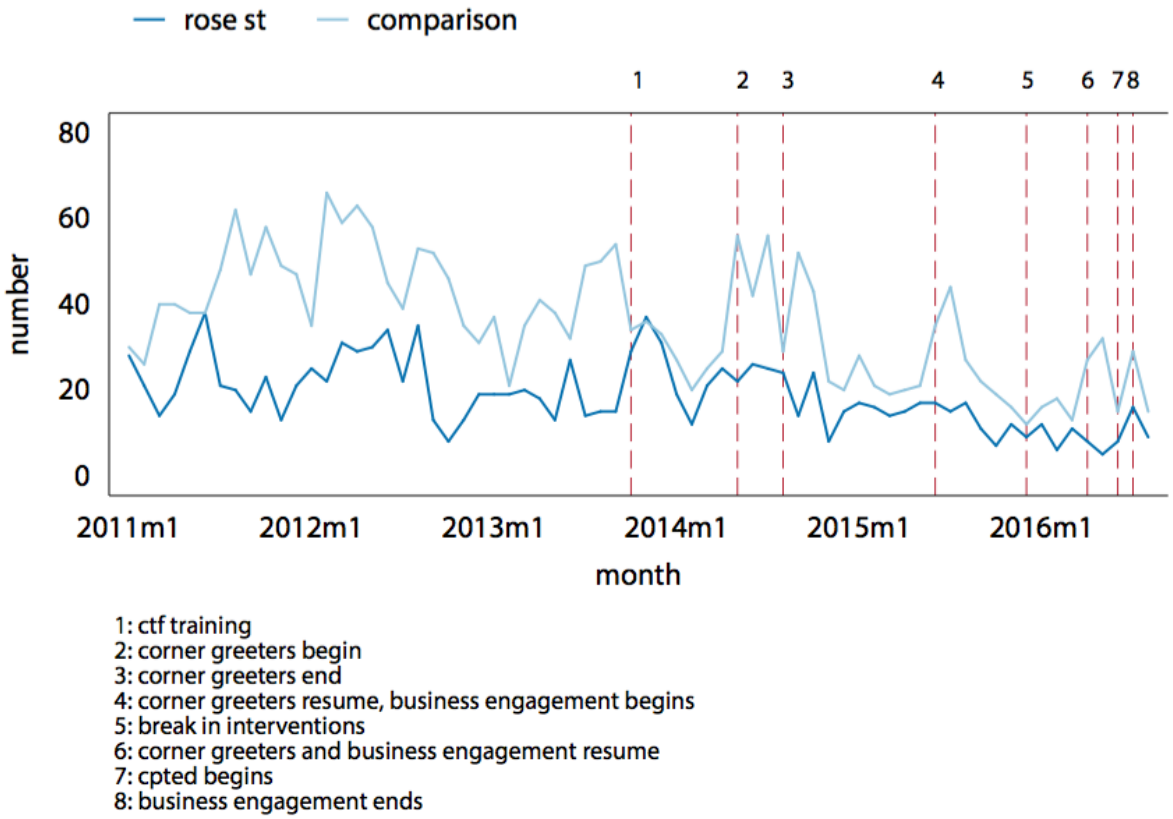


Figure 16: Calls for service at Rainier and Henderson and comparison site, January 2011–August 2016

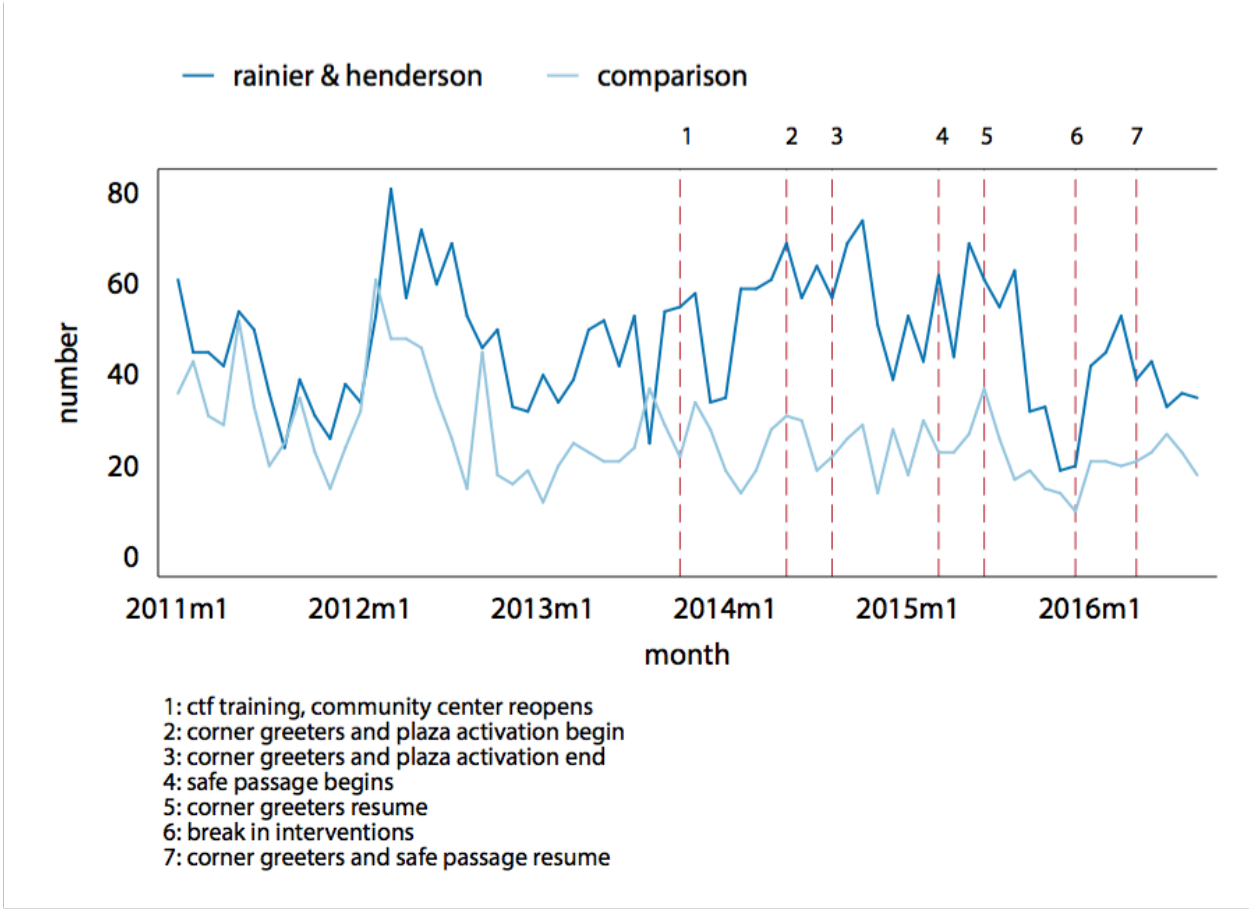


Figure 17: Calls for service at Light Rail and comparison site, January 2011–August 2016

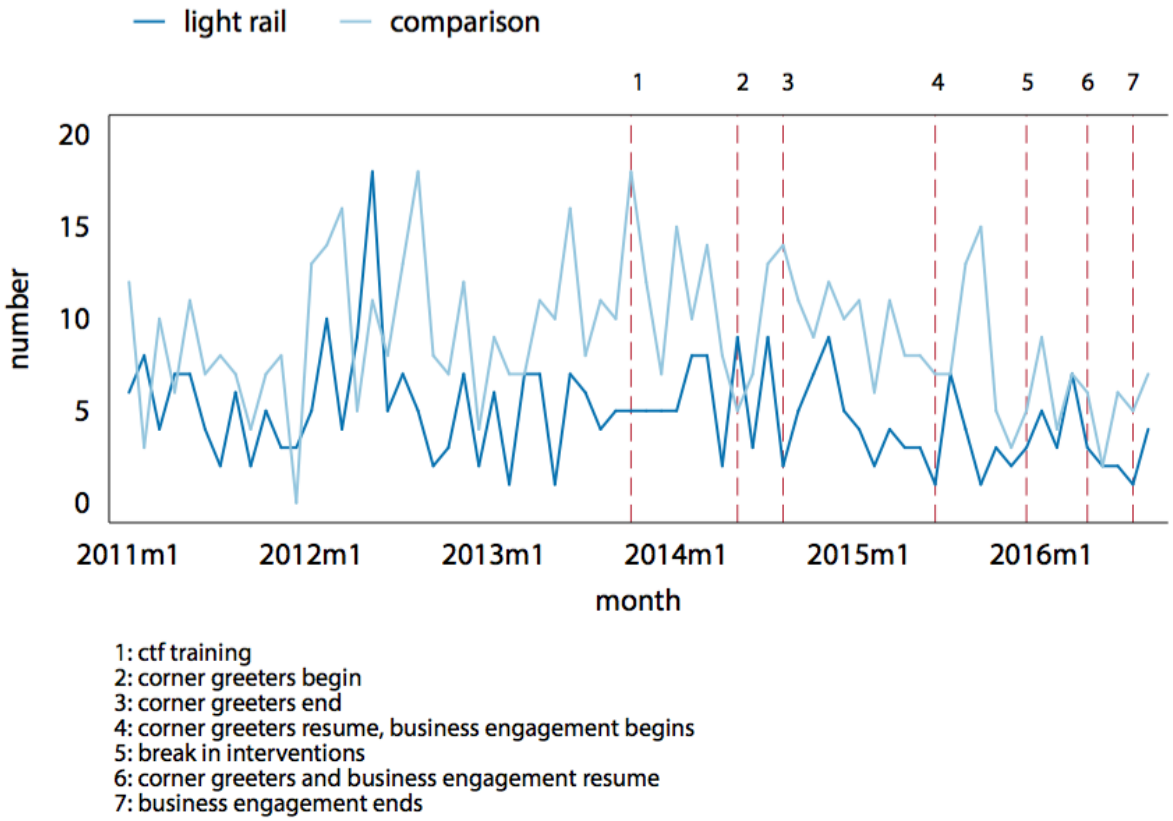


Figure 18: Calls for service at Lake Washington and comparison site, January 2011–August 2016

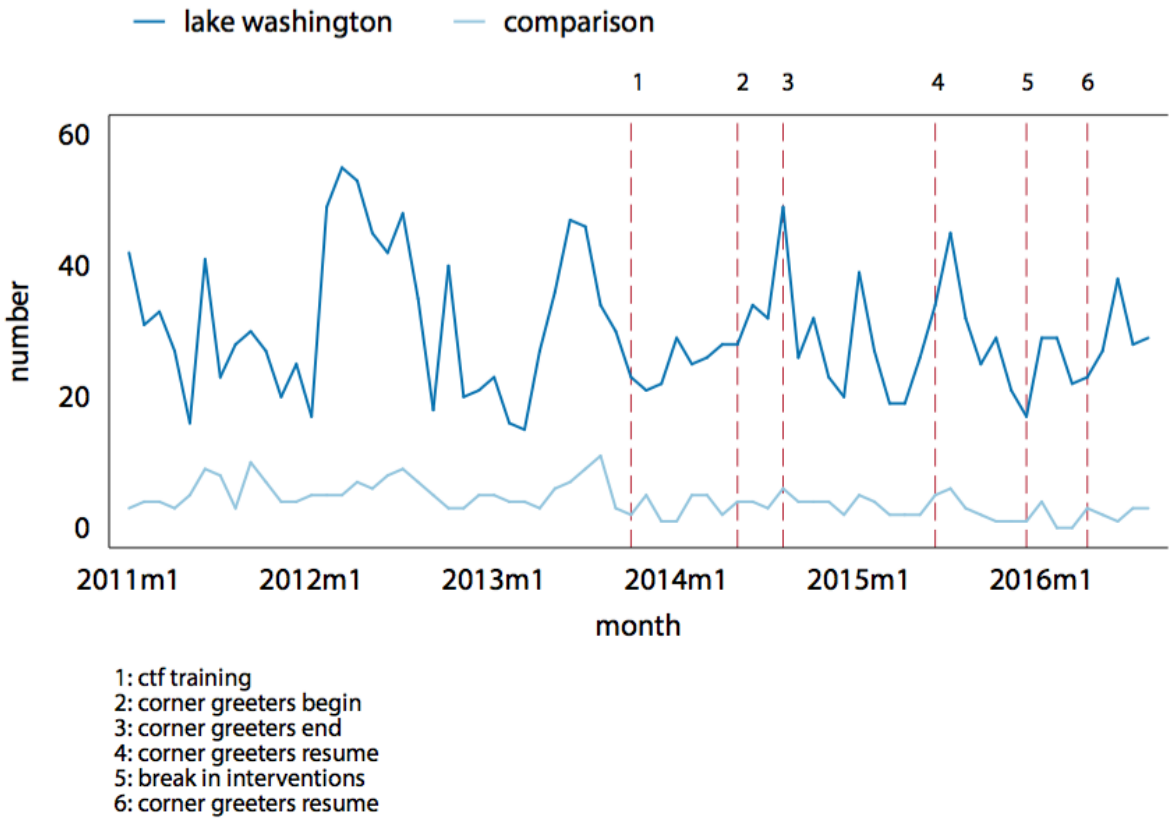


Figure 19: Calls for service at Safeway and comparison site, January 2011–August 2016

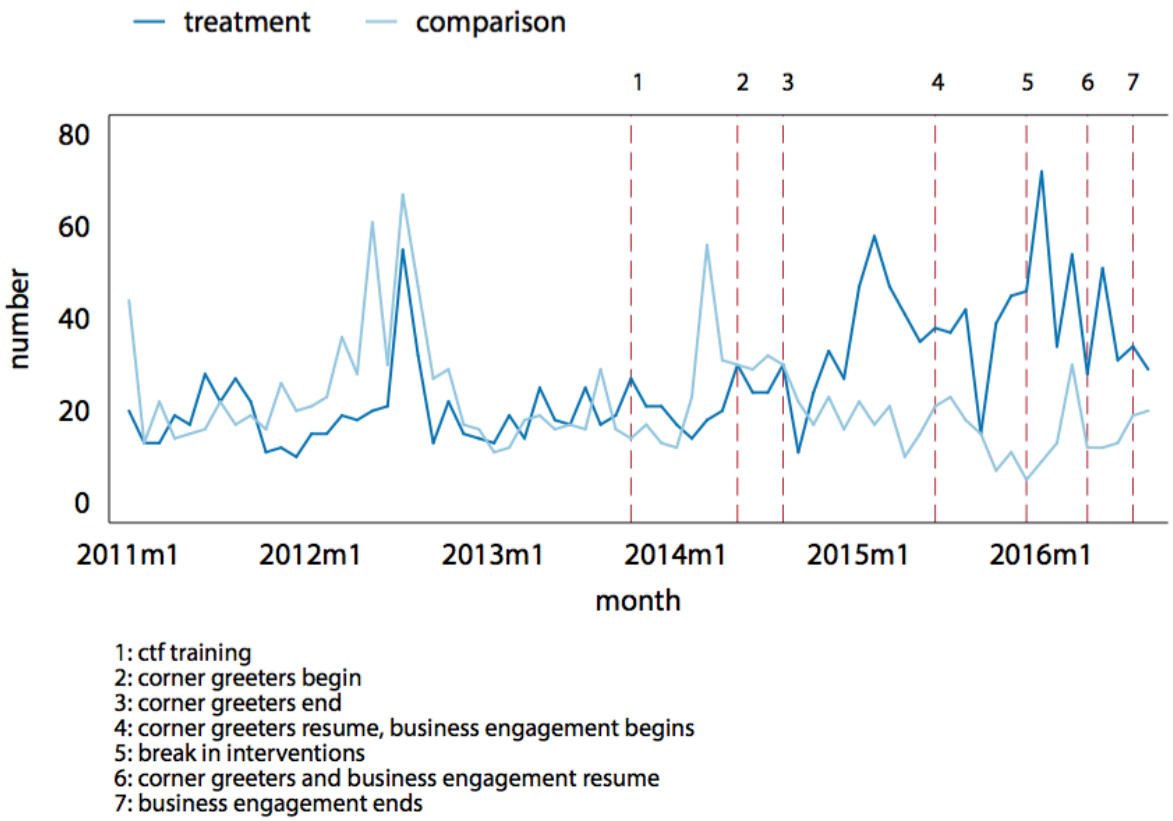


Figure 20: Calls for service at Corner Greeter and comparison sites, January 2011–August 2016

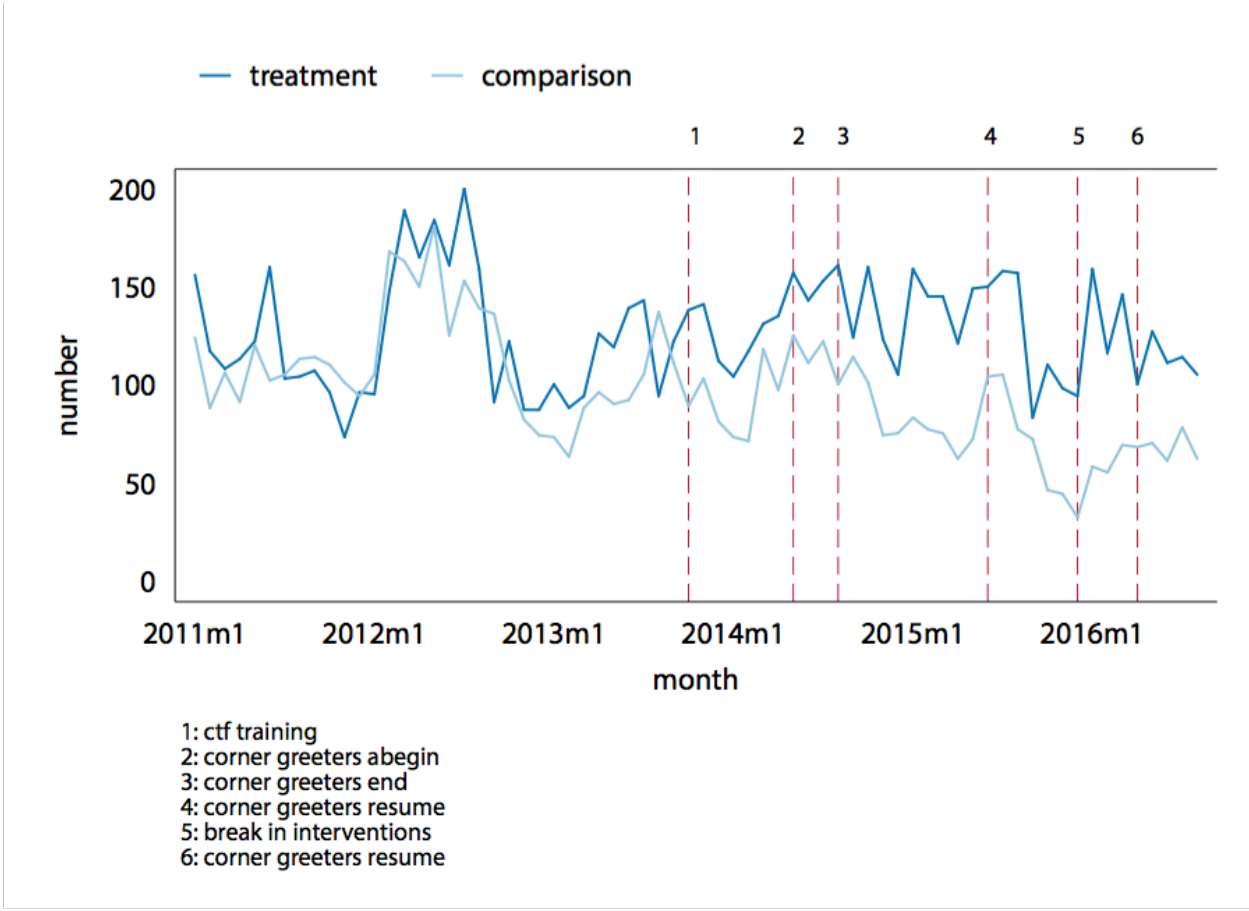


Figure 21: Calls for service at Plaza Activation and comparison site, January 2011–August 2016

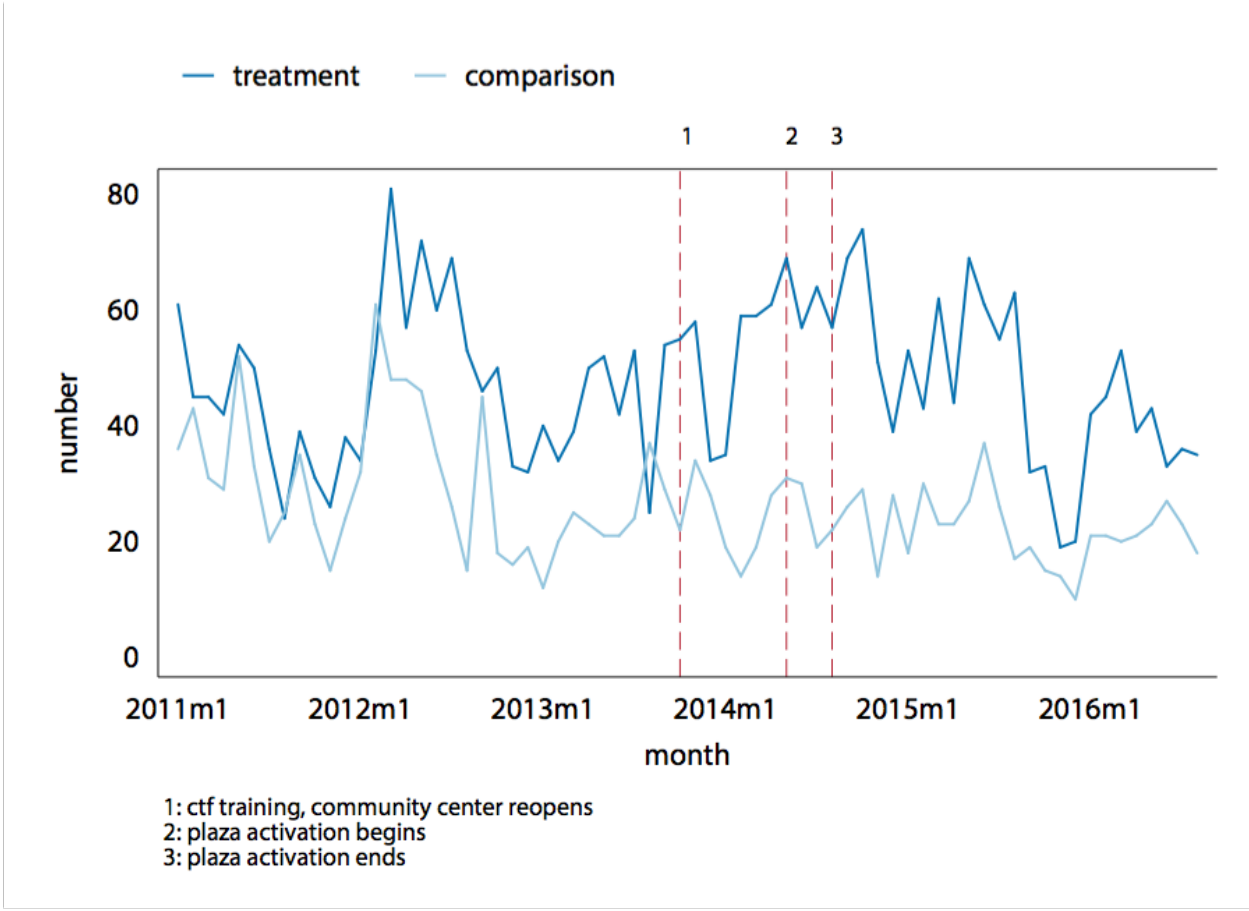


Figure 22: Calls for service at Safe Passage/Campus Safety and comparison site, January 2011–August 2016

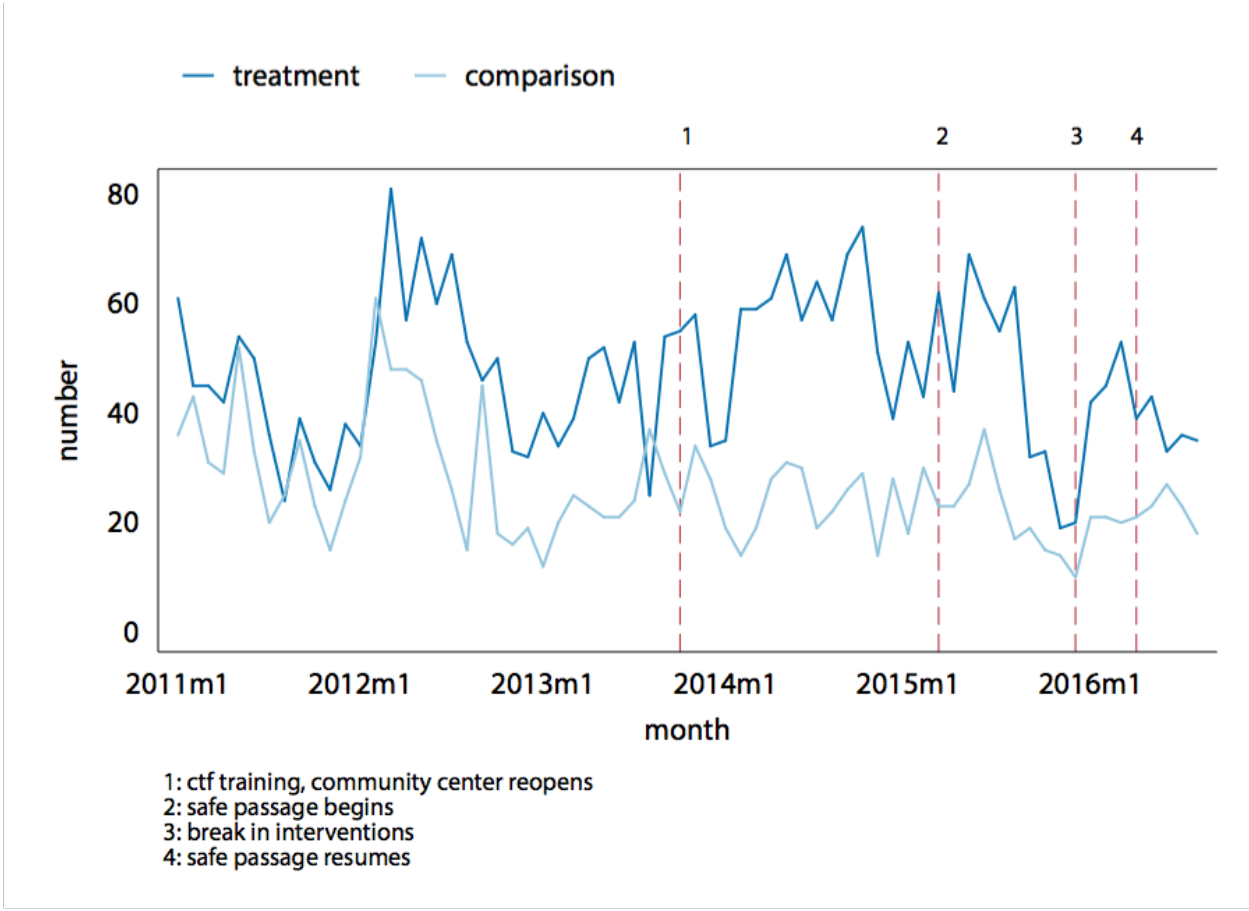


Figure 23: Calls for service at Business Engagement and comparison sites, January 2011–August 2016

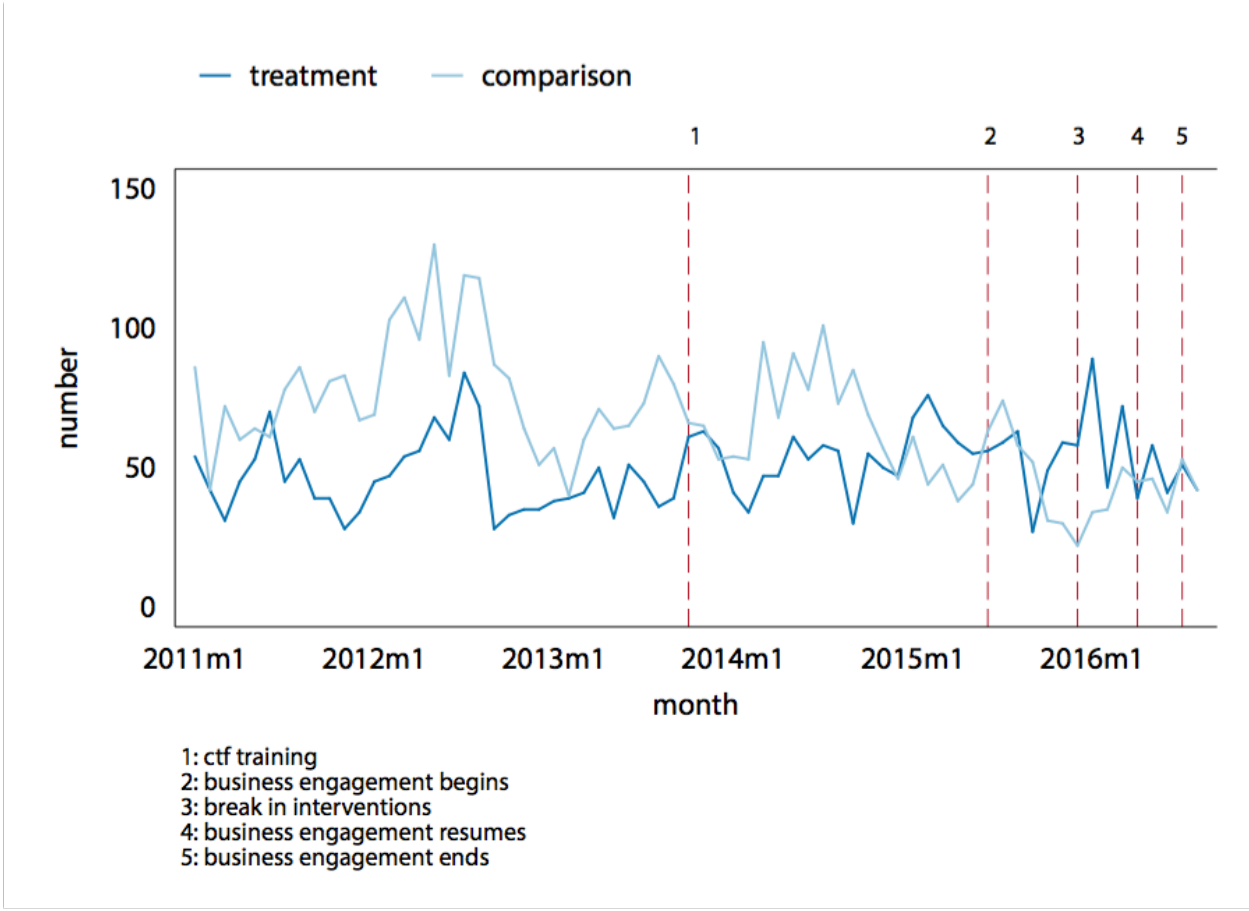


Figure 24: Calls for service at CPTED and comparison sites, January 2011–August 2016

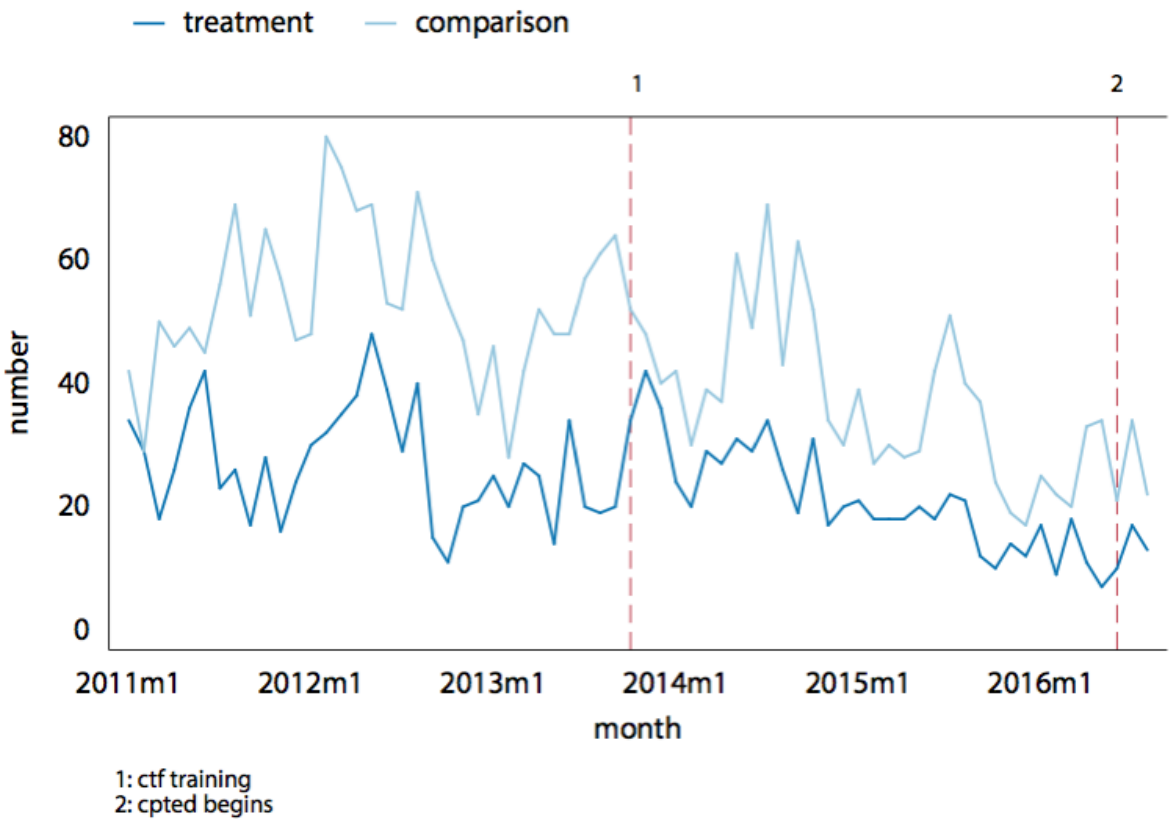
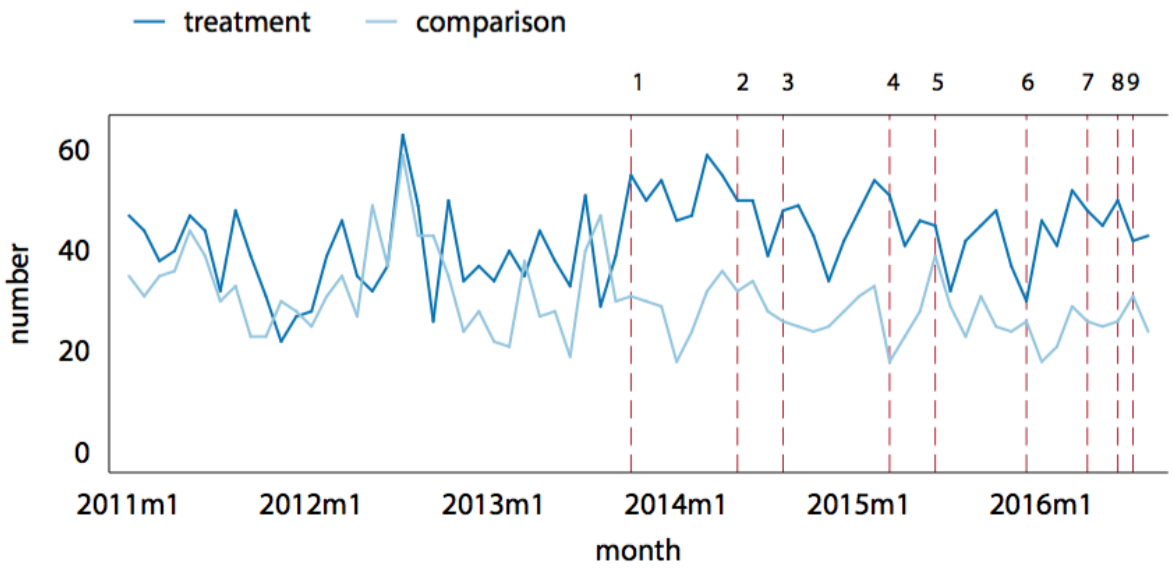


Figure 25: Crime incident reports in treatment and comparison sites, January 2011–August 2016



1: ctf training, community center reopens
2: corner greeters and plaza activation begin
3: corner greeters and plaza activation end
4: safe passage begins
5: corner greeters resume, business engagement begins
6: break in interventions
7: corner greeters, safe passage, business engagement resume
8: cpted begins
9: business engagement ends

Figure 26: Crime incident reports at Rose Street and comparison site, January 2011–August 2016

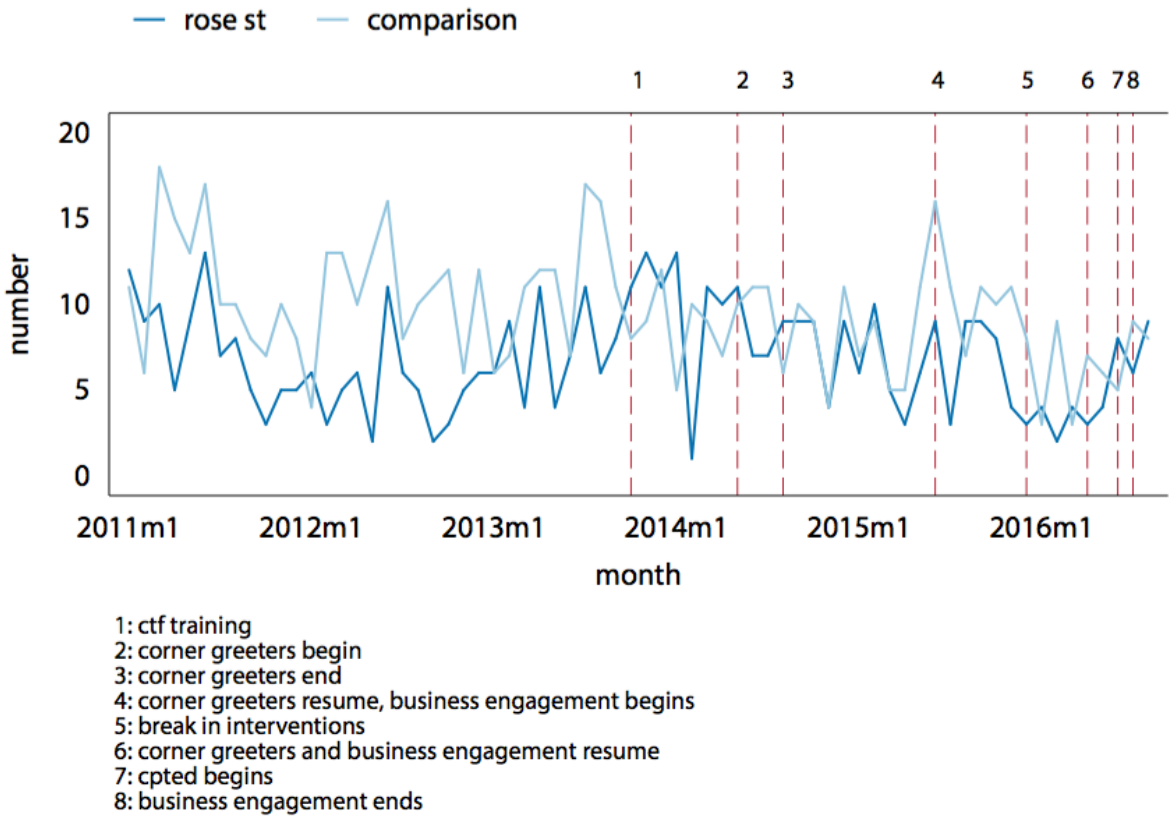


Figure 27: Crime incident reports at Rainier and Henderson and comparison site, January 2011–August 2016

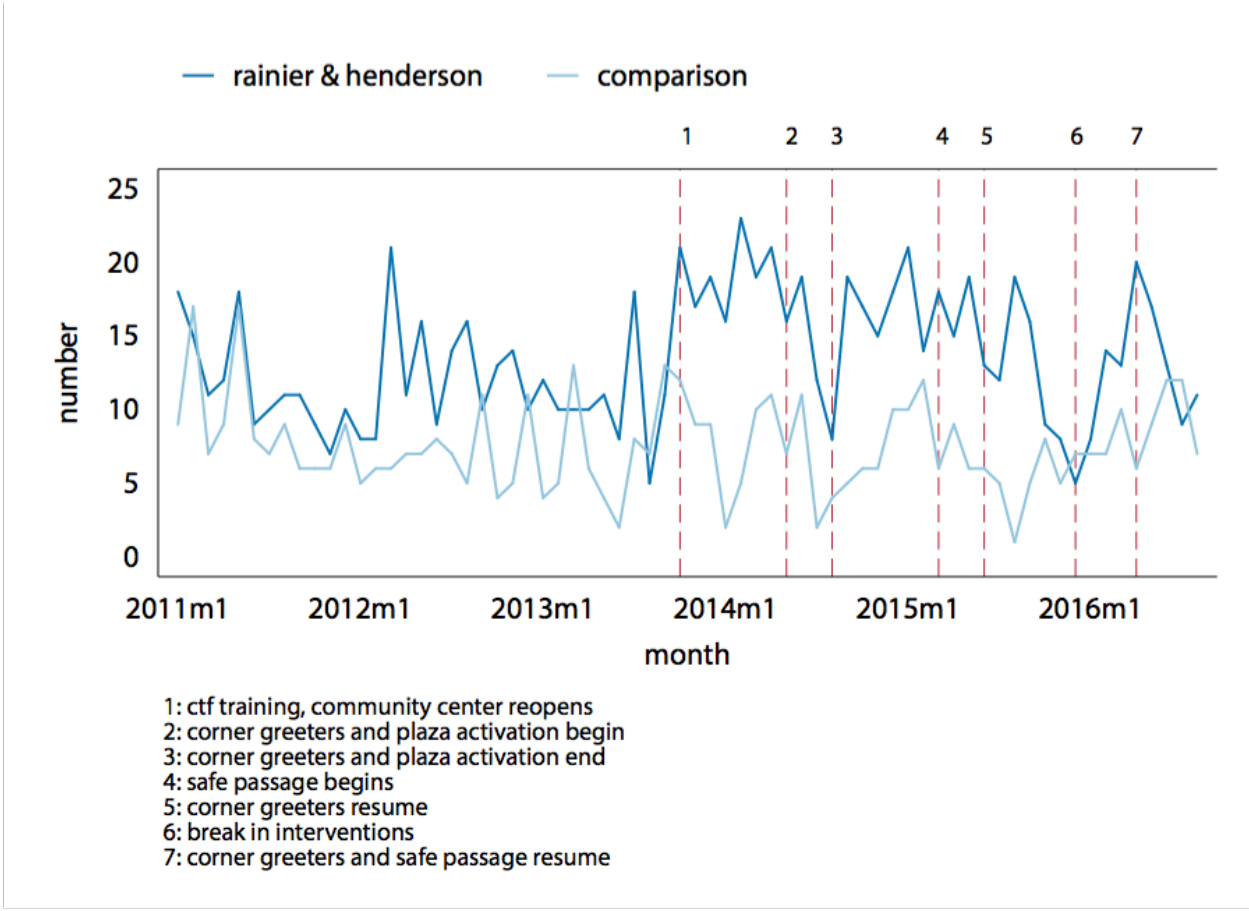


Figure 28: Crime incident reports at Light Rail and comparison site, January 2011–August 2016

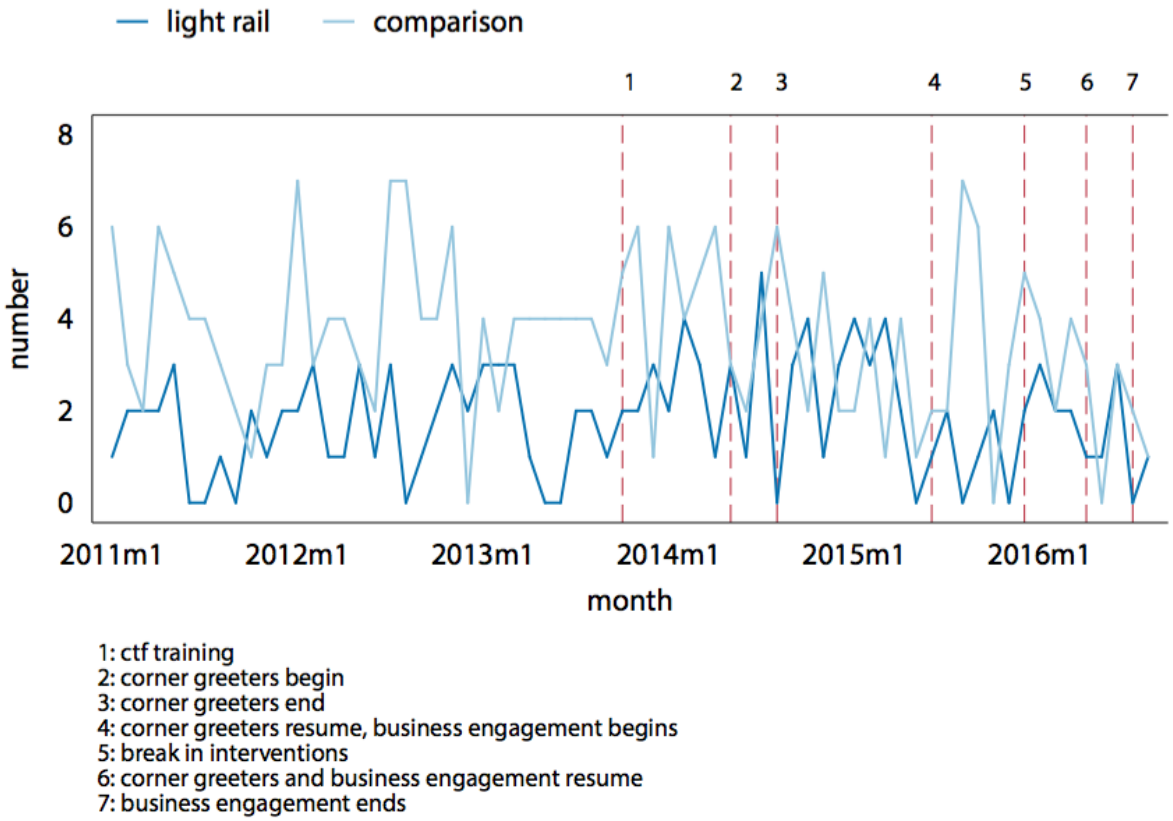


Figure 29: Crime incident reports at Lake Washington and comparison site, January 2011–August 2016

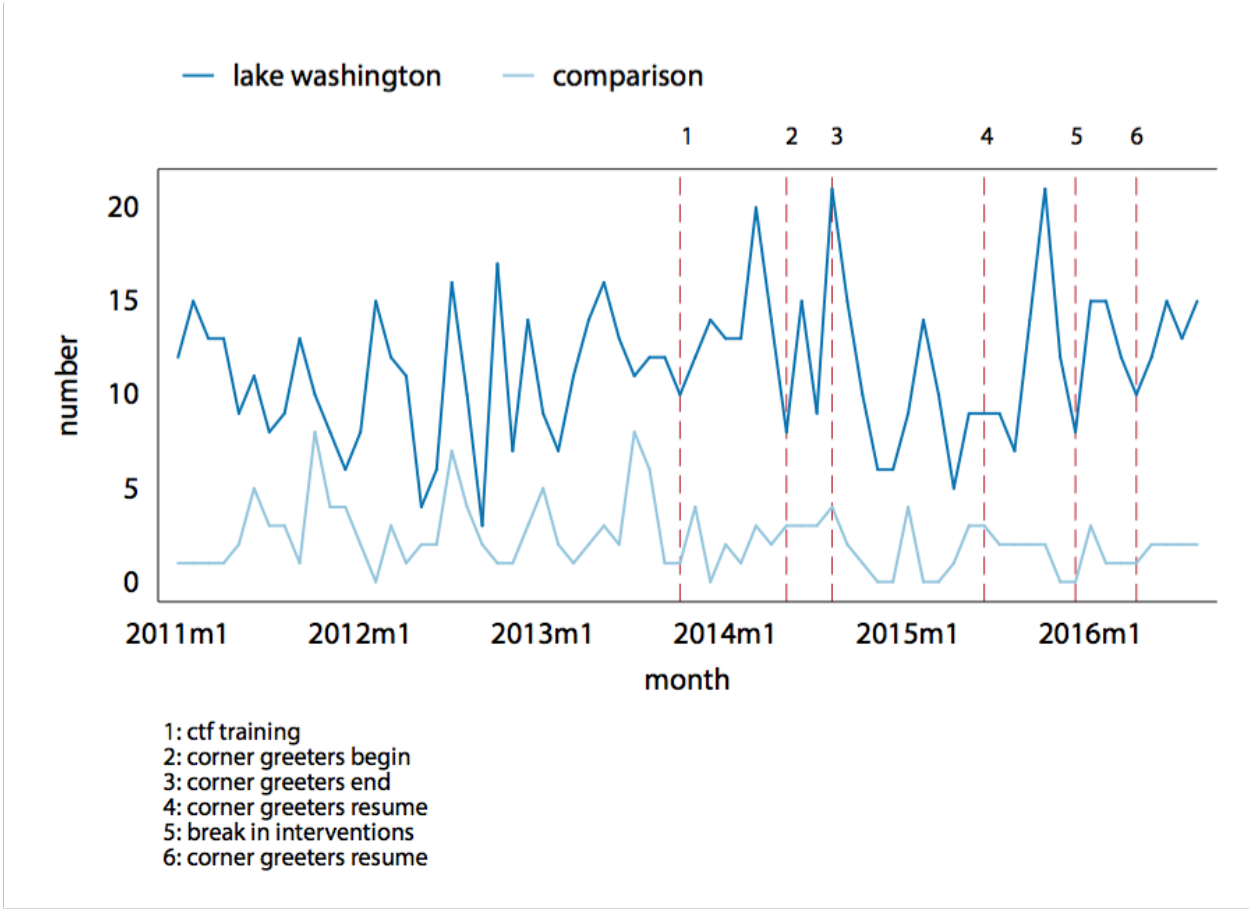


Figure 30: Crime incident reports at Safeway and comparison site, January 2011–August 2016

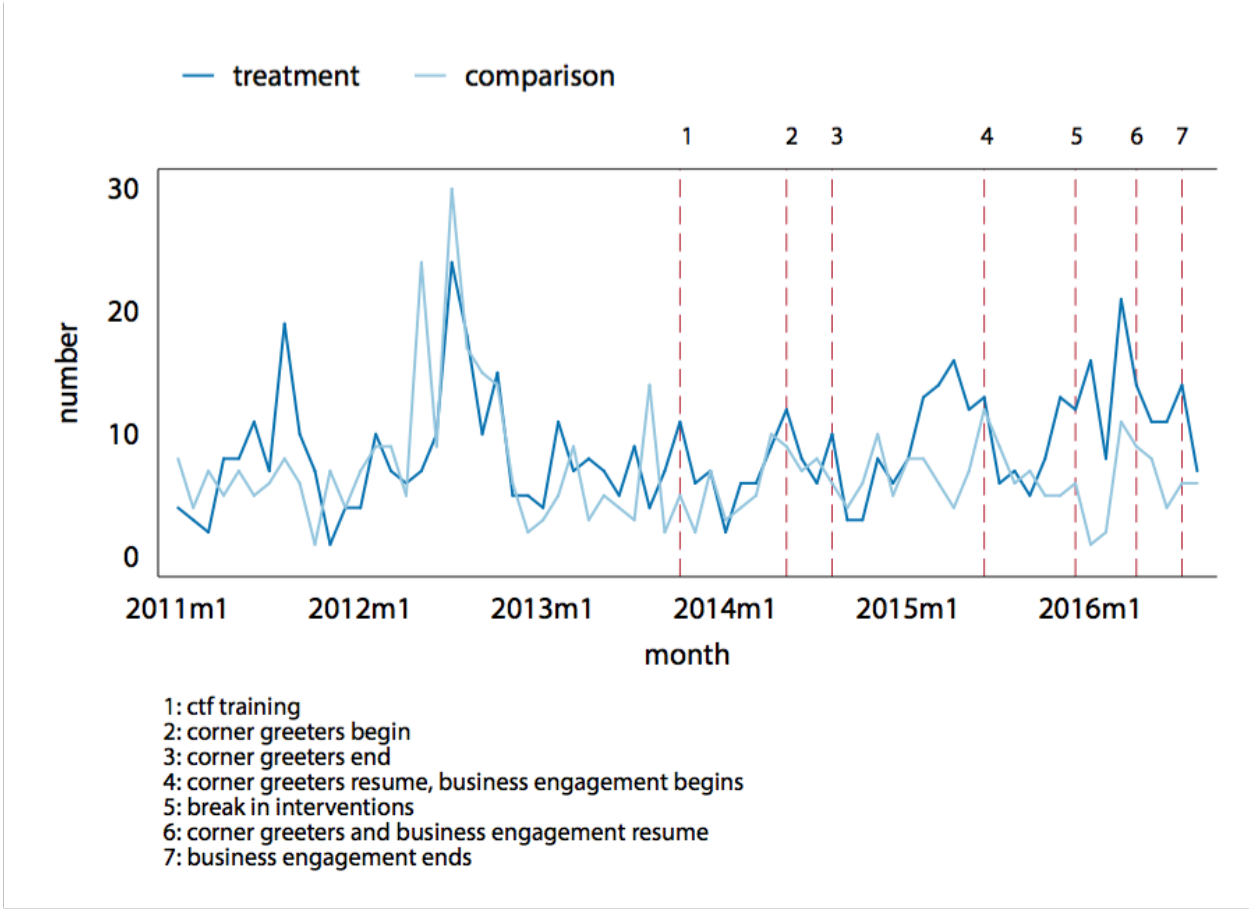


Figure 31: Crime incident reports at Corner Greeter and comparison sites, January 2011–August 2016

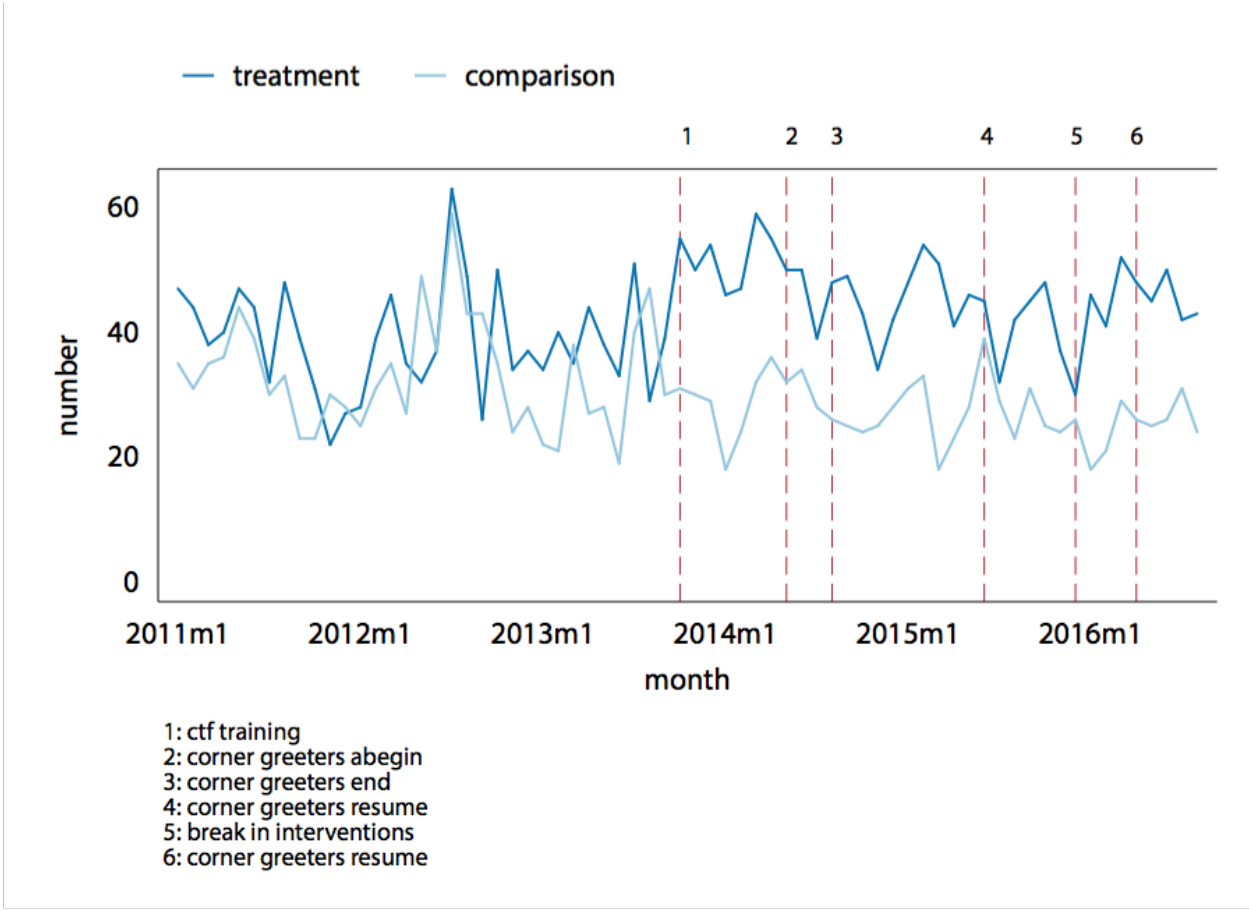


Figure 32: Crime incident reports at Plaza Activation and comparison site, January 2011–August 2016

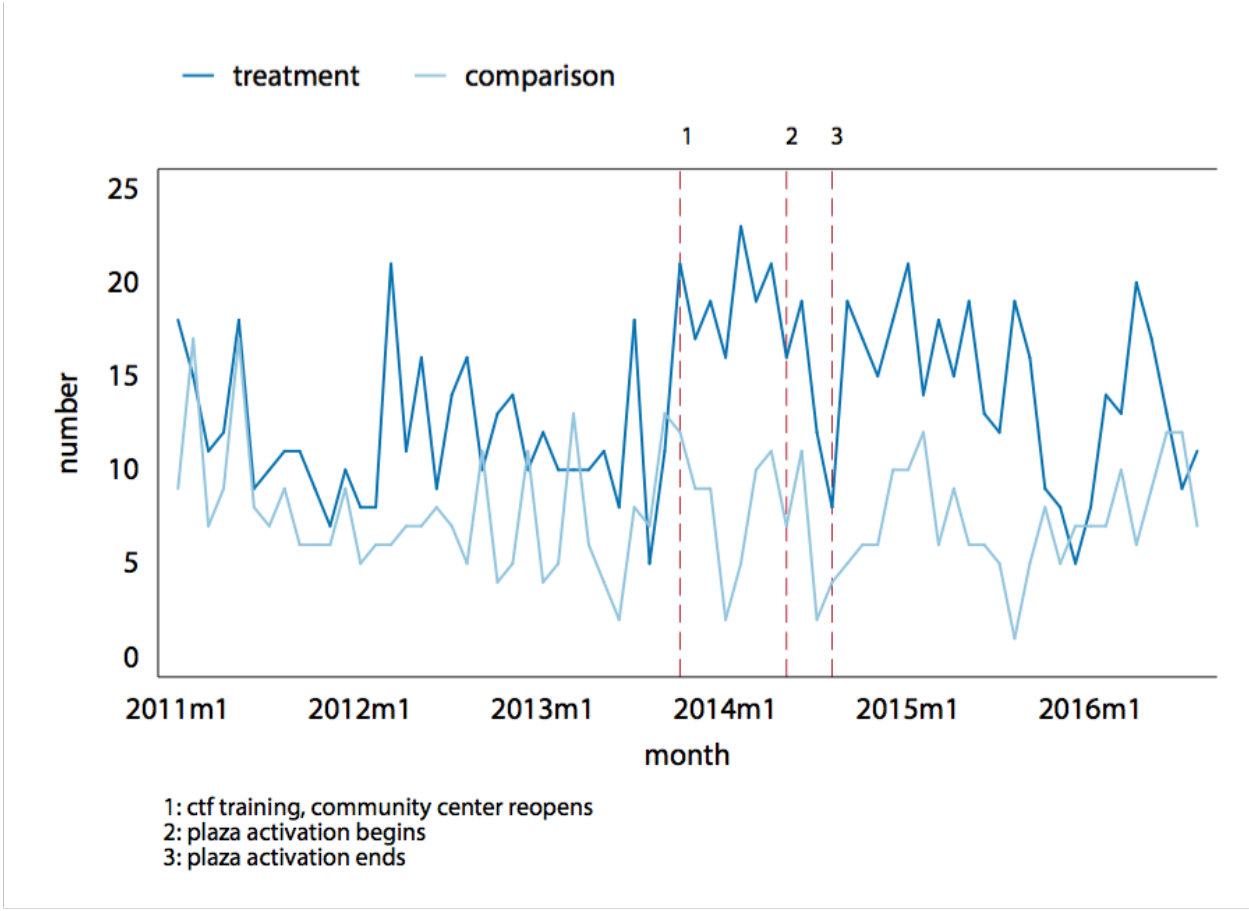


Figure 33: Crime incident reports at Safe Passage/Campus Safety and comparison site, January 2011–August 2016

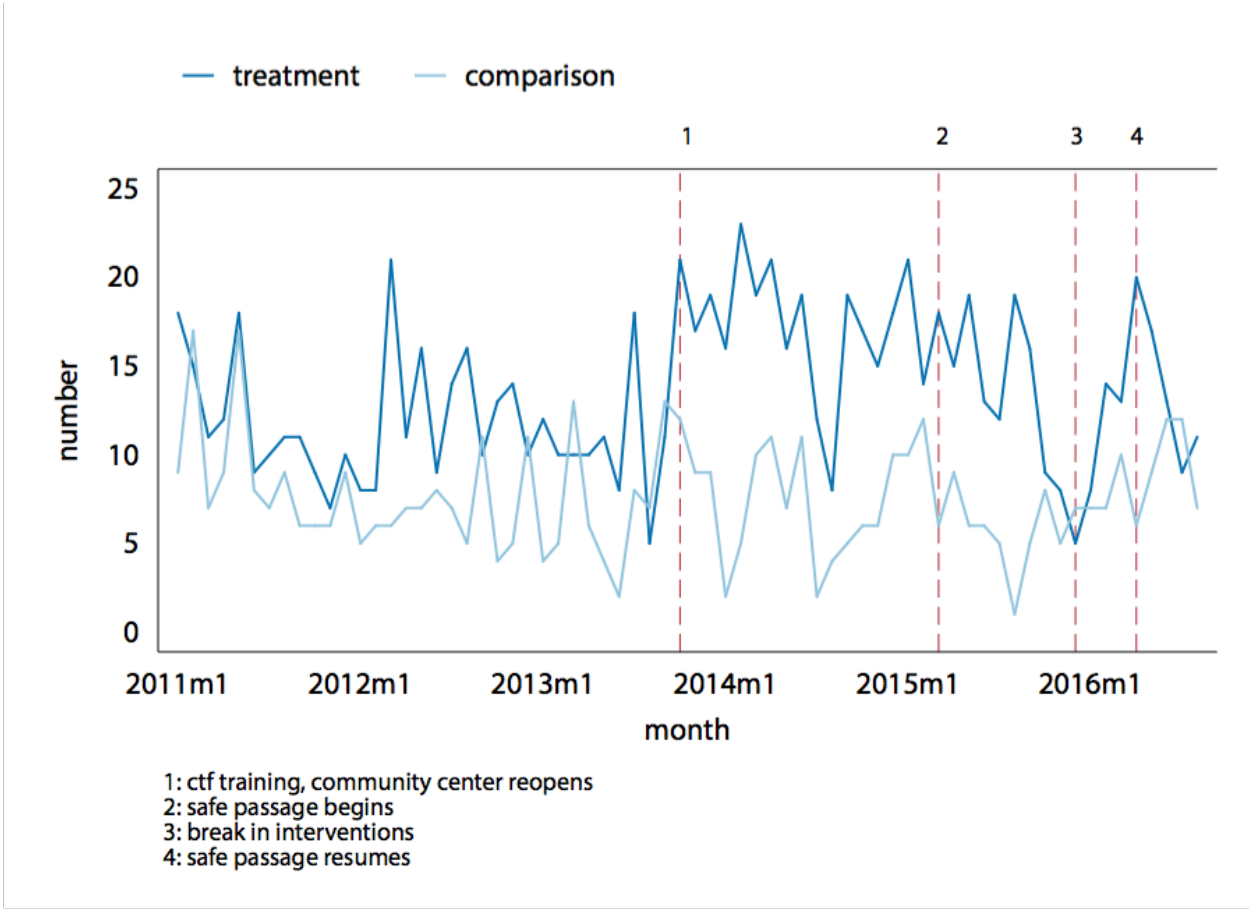


Figure 34: Crime incident reports at Business Engagement and comparison sites, January 2011–August 2016

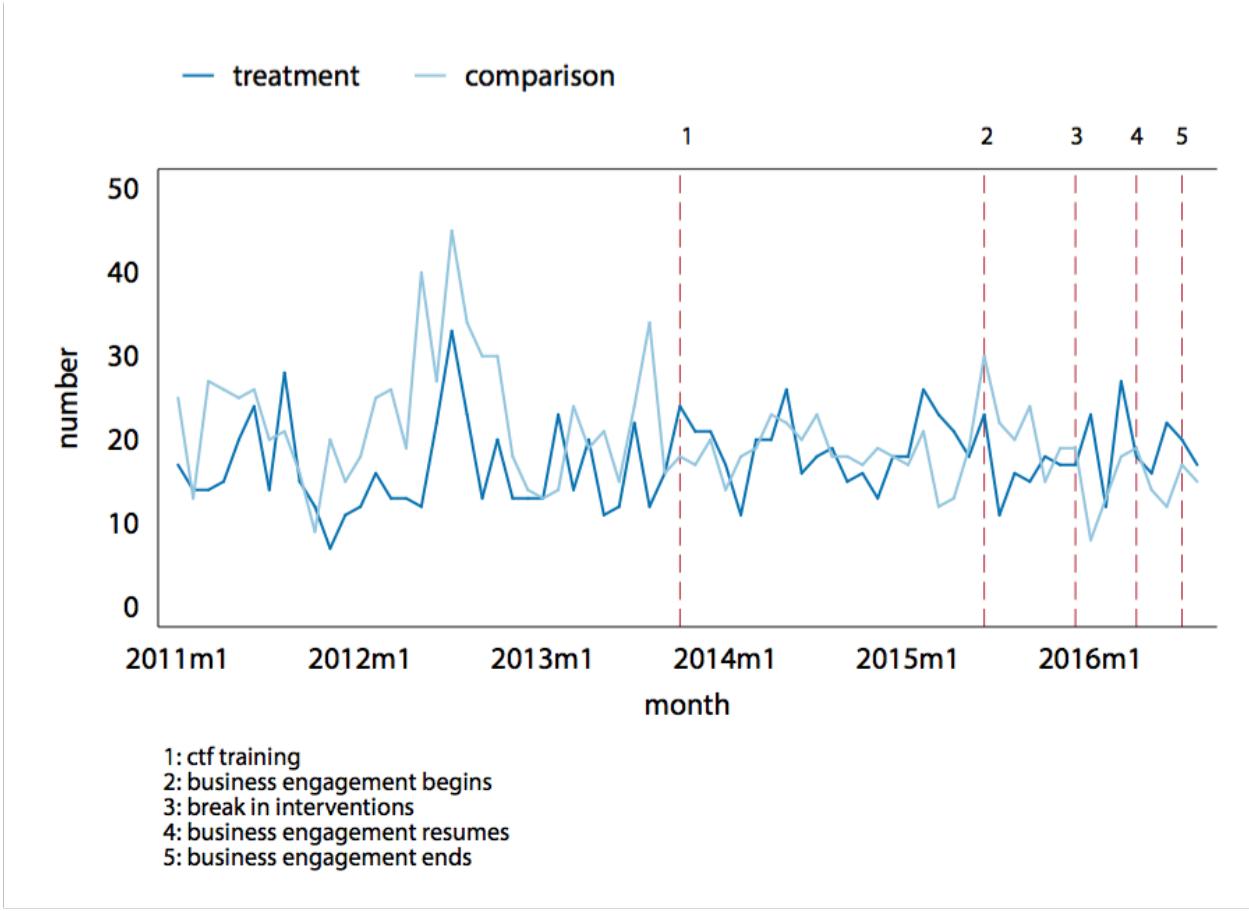


Figure 35: Crime incident reports at CPTED and comparison sites, January 2011–August 2016

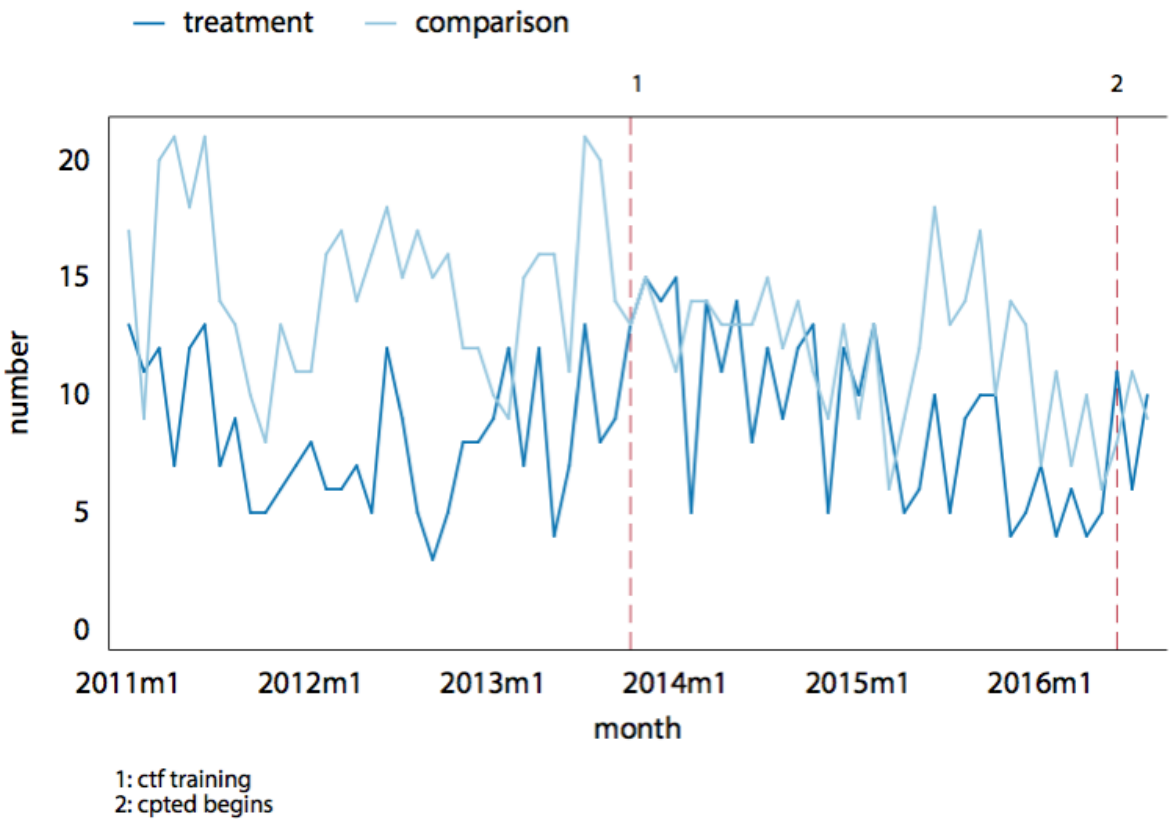


Figure 36: Youth incident reports in treatment and comparison sites, January 2011–August 2016

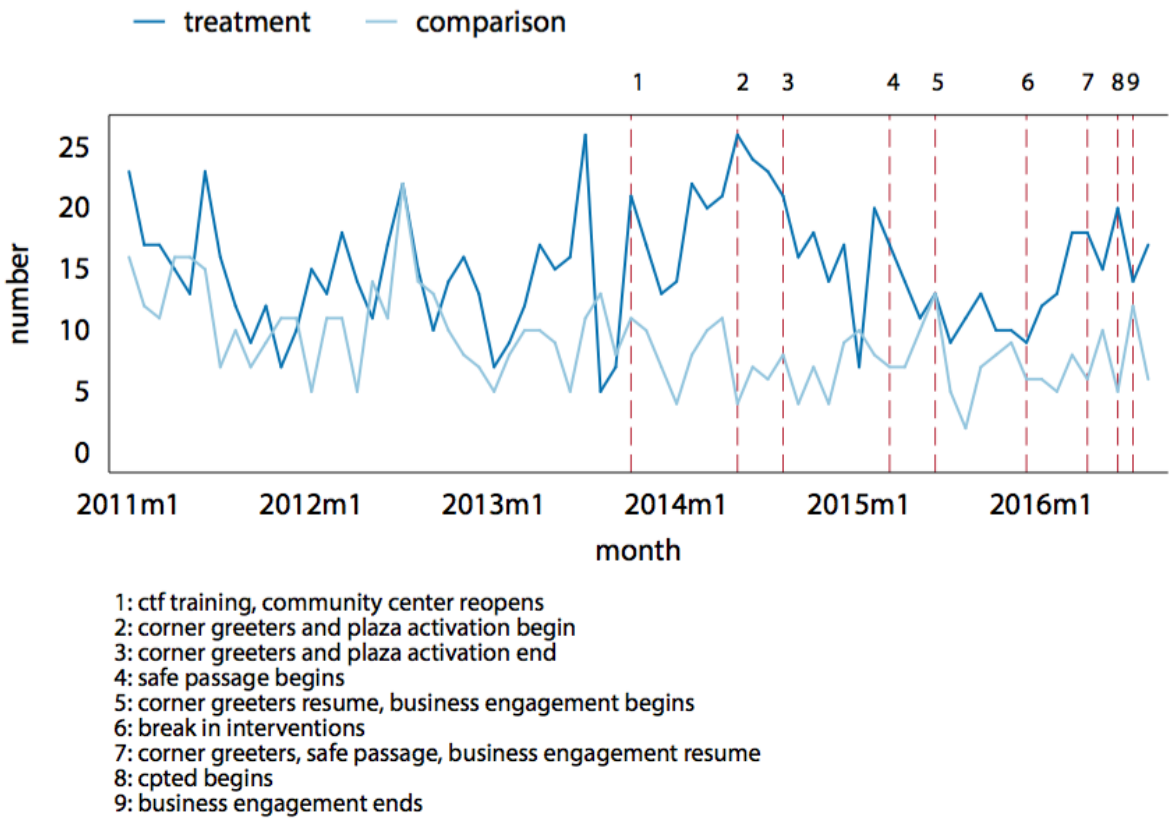


Figure 37: Youth incident reports at Rose Street and comparison site, January 2011–August 2016

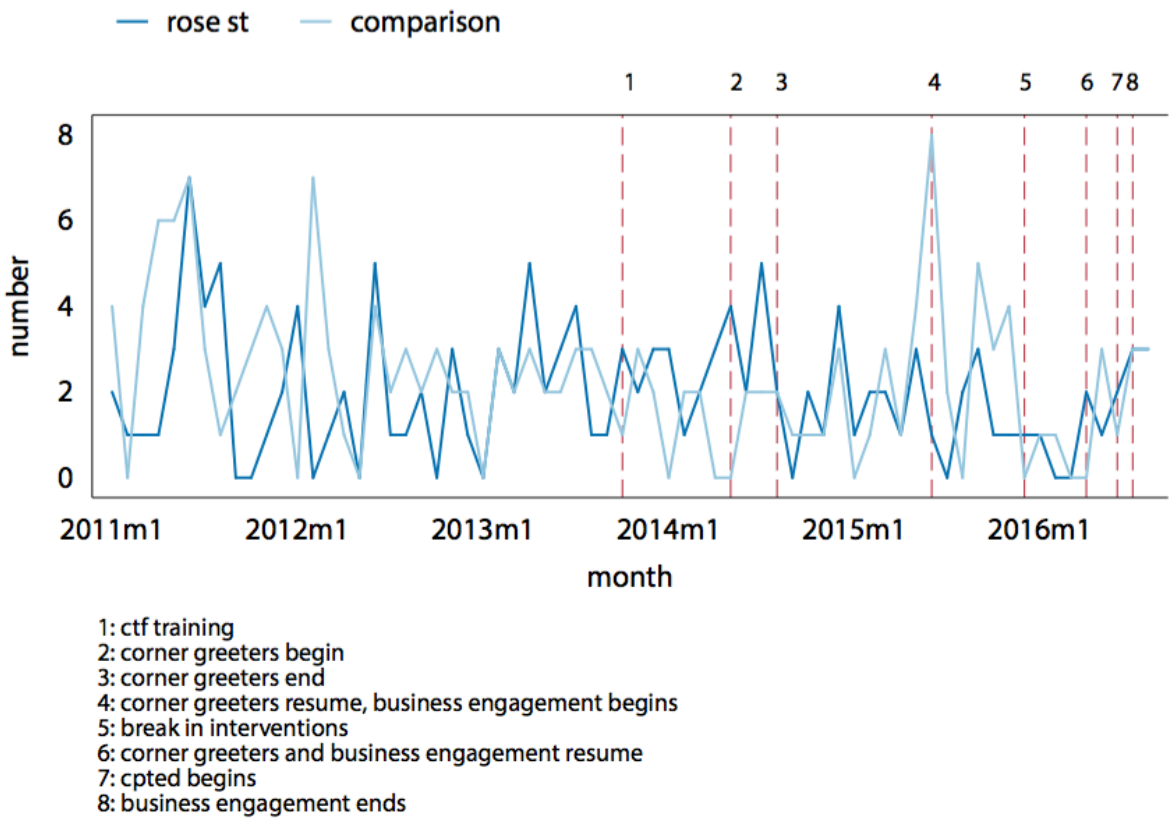


Figure 38: Youth incident reports at Rainier and Henderson and comparison site, January 2011–August 2016

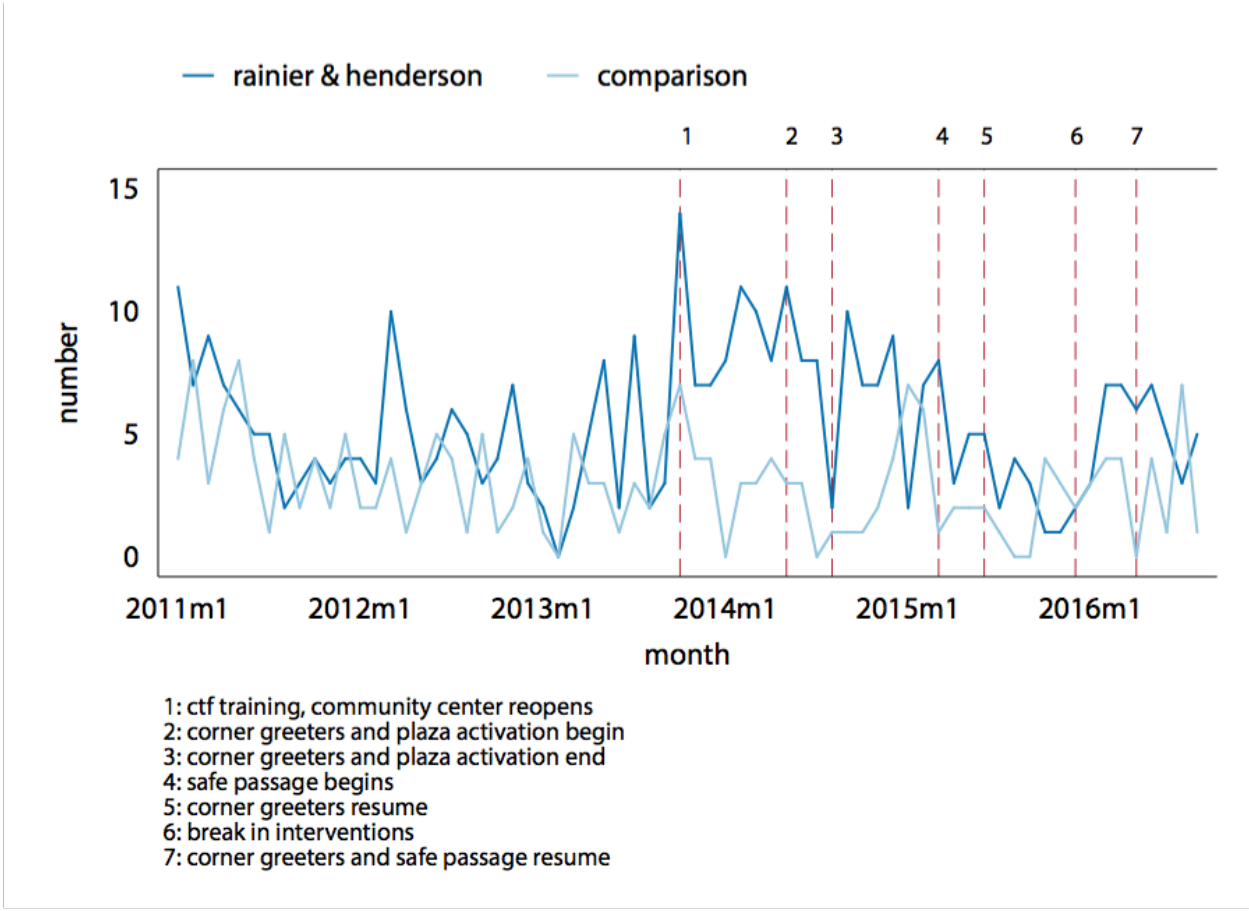


Figure 39: Youth incident reports at Light Rail and comparison site, January 2011–August 2016

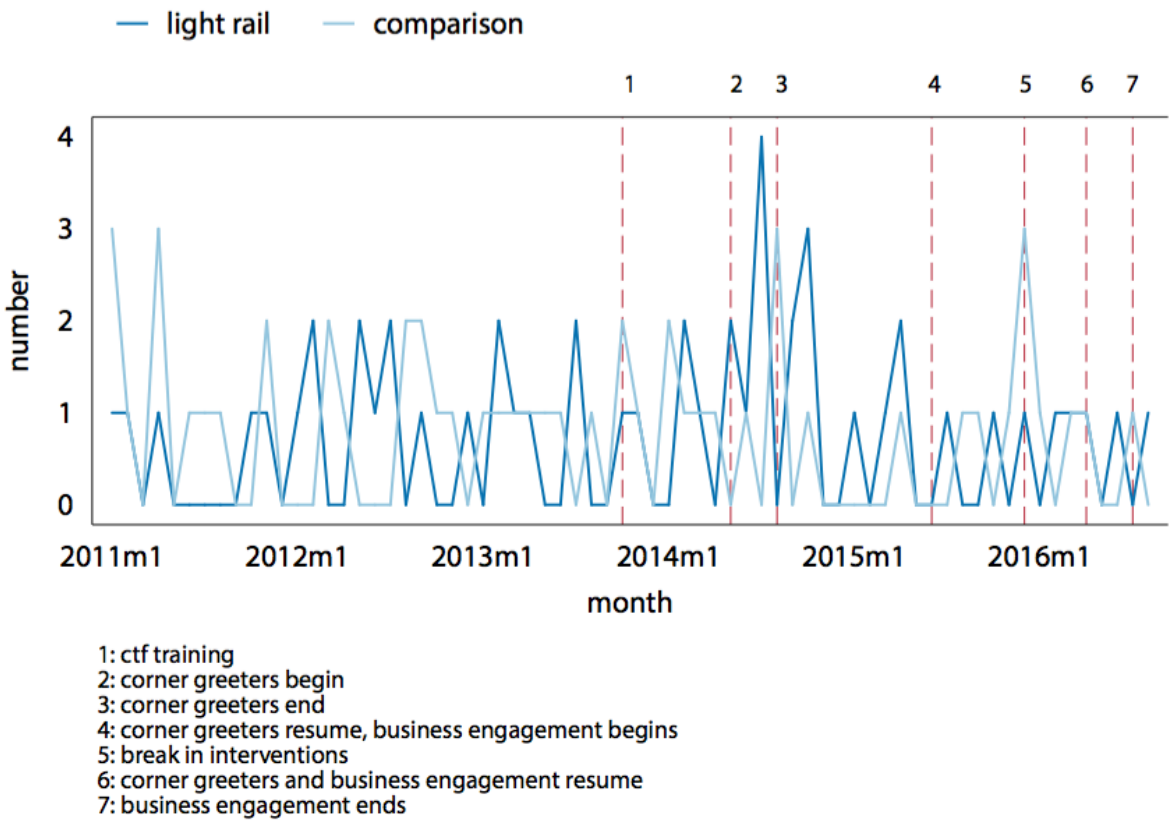


Figure 40: Youth incident reports at Lake Washington and comparison site, January 2011–August 2016

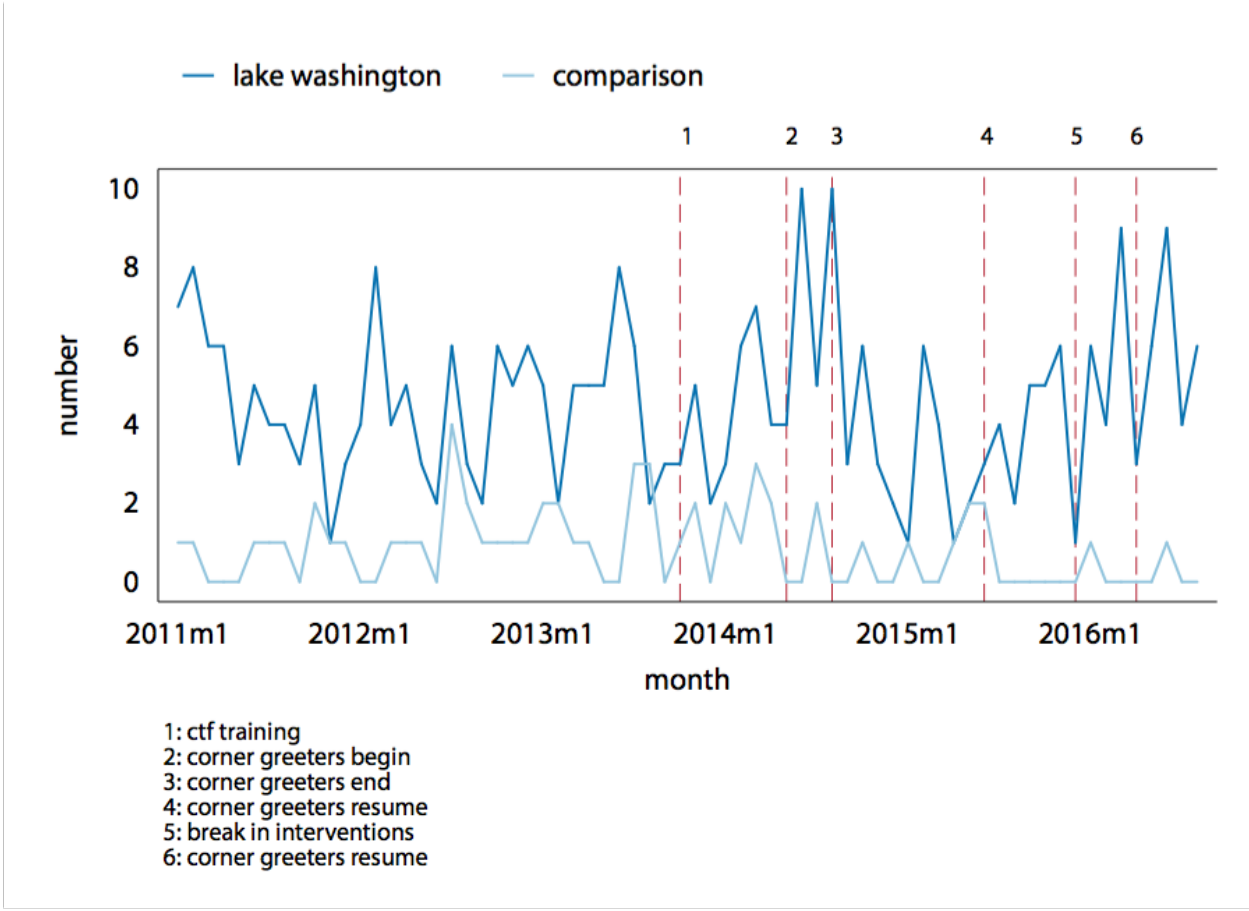


Figure 41: Youth incident reports at Safeway and comparison site, January 2011–August 2016

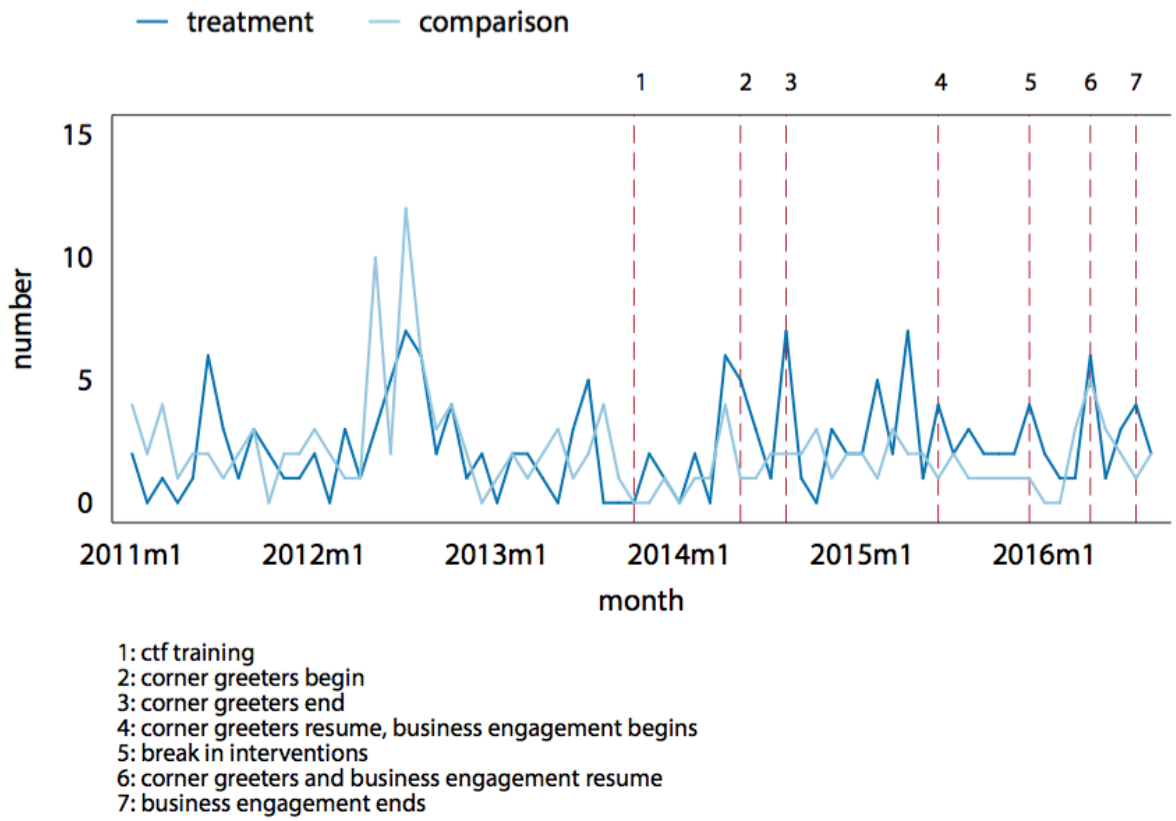


Figure 42: Youth incident reports at Corner Greeter and comparison sites, January 2011–August 2016

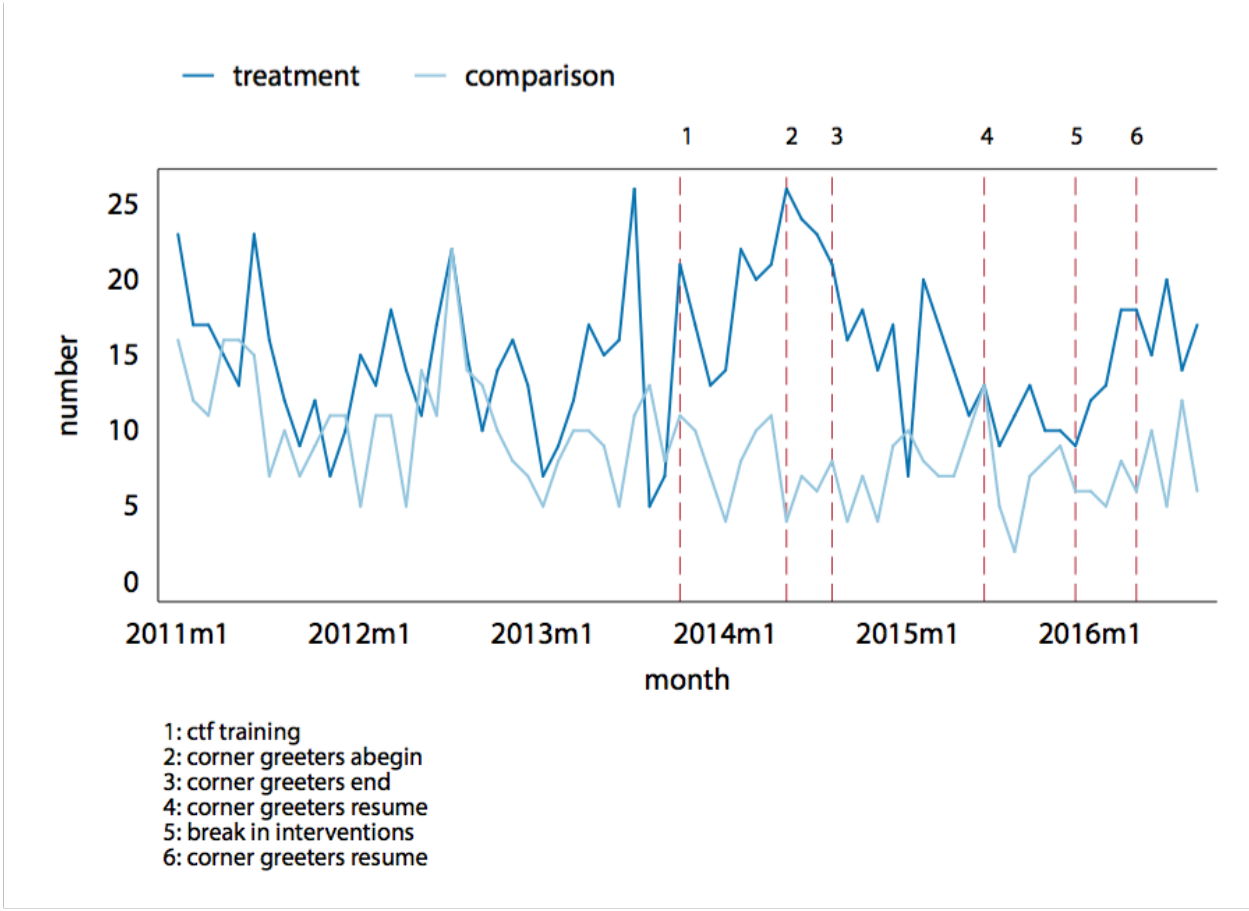


Figure 43: Youth incident reports at Plaza Activation and comparison site, January 2011–August 2016

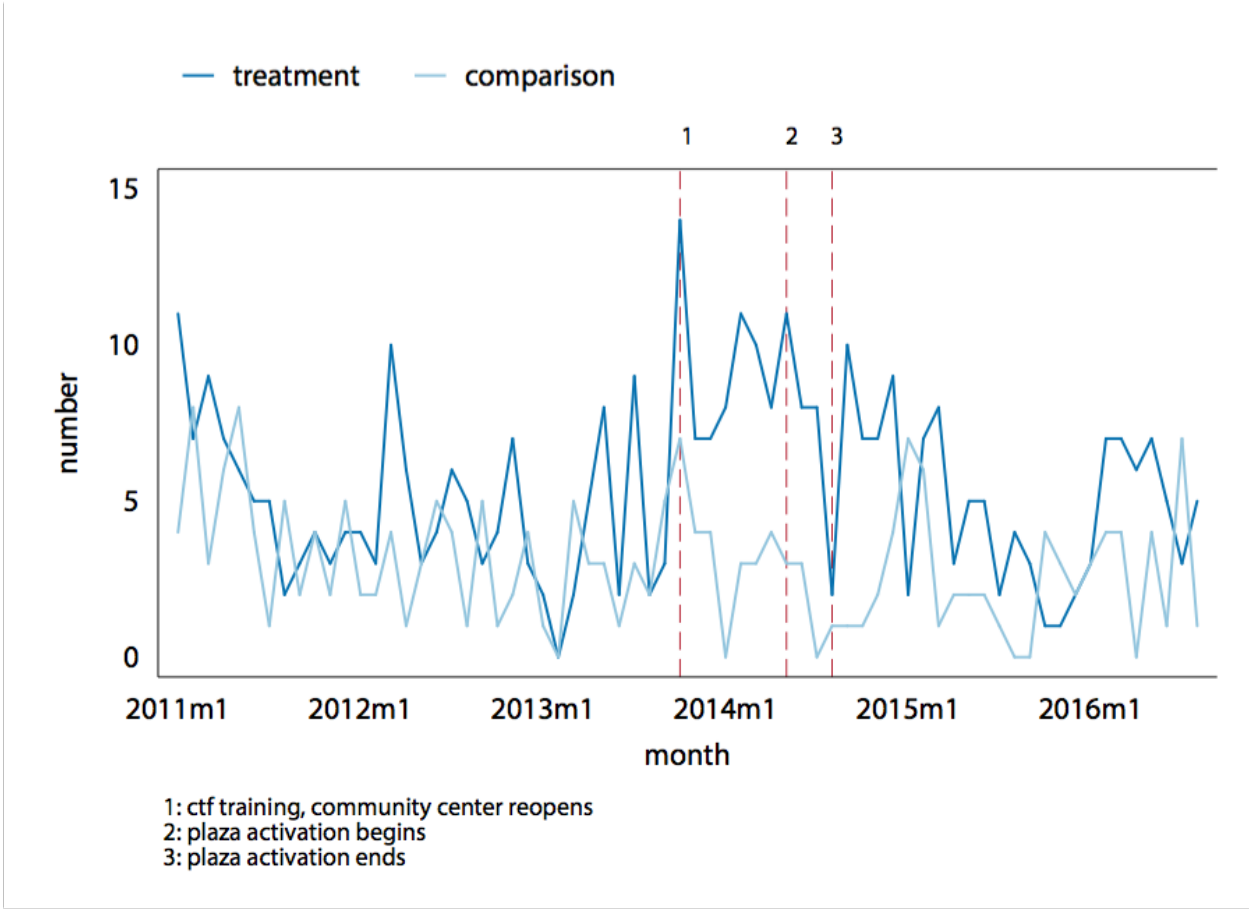


Figure 44: Youth incident reports at Safe Passage/Campus Safety and comparison site, January 2011–August 2016

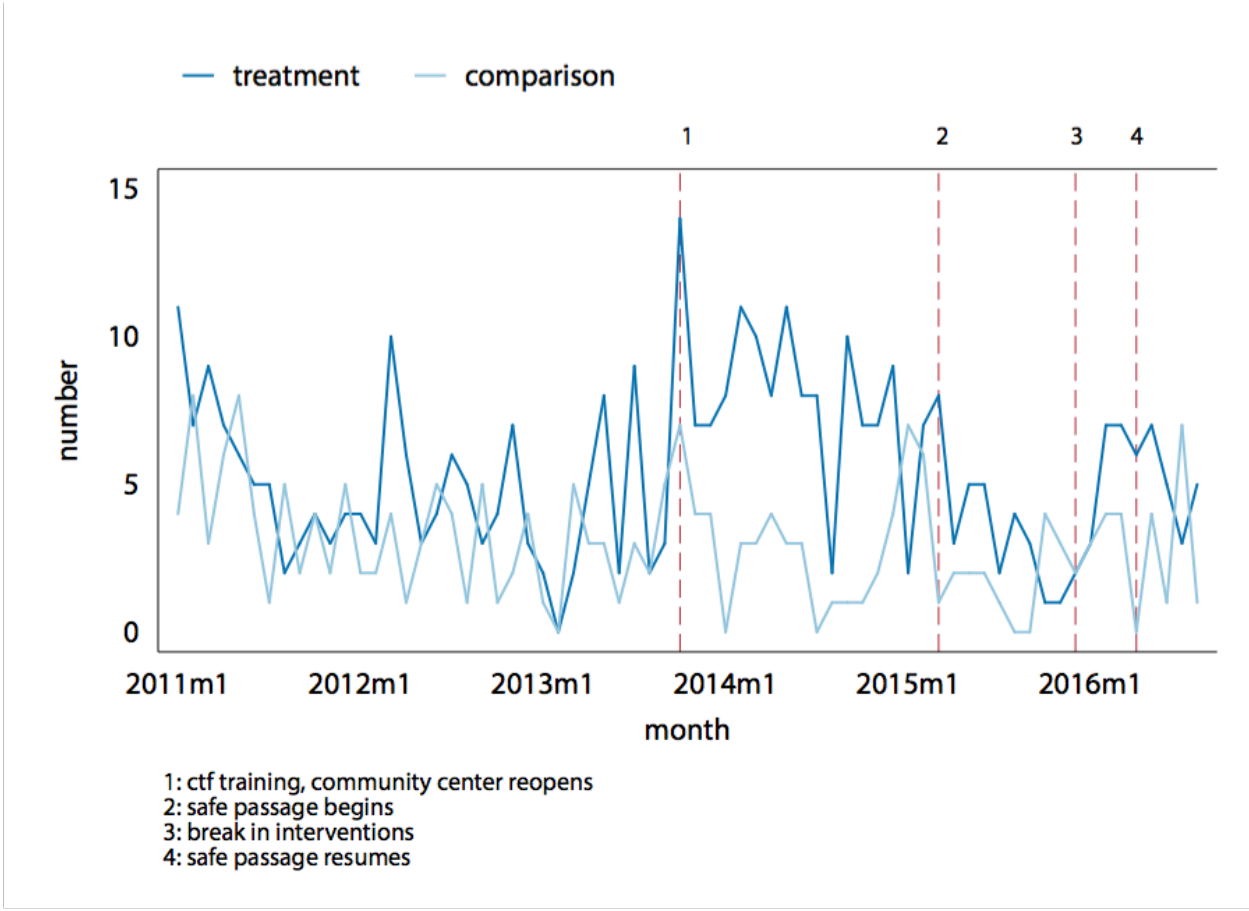


Figure 45: Youth incident reports at Business Engagement and comparison sites, January 2011–August 2016

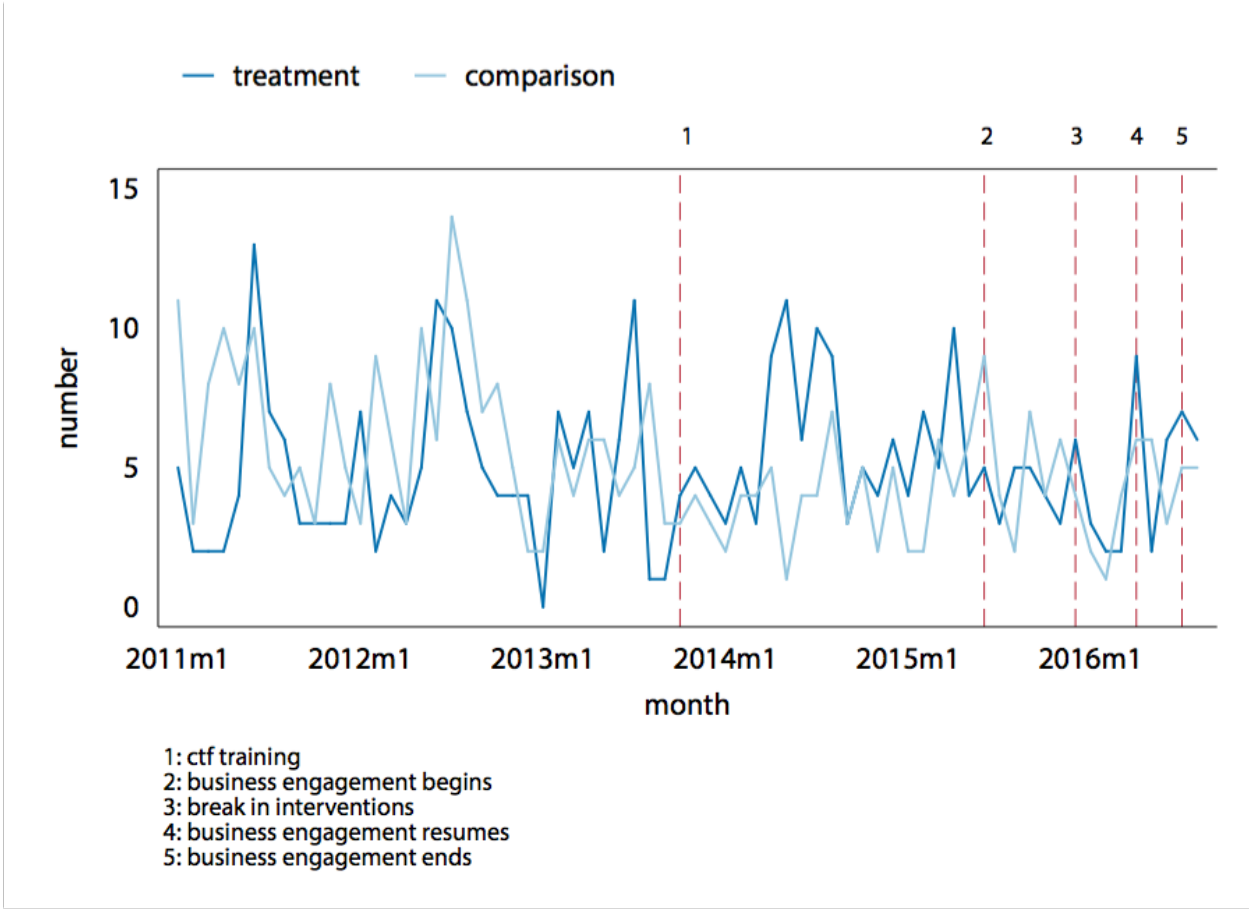


Figure 46: Youth incident reports at CPTED and comparison sites, January 2011–August 2016

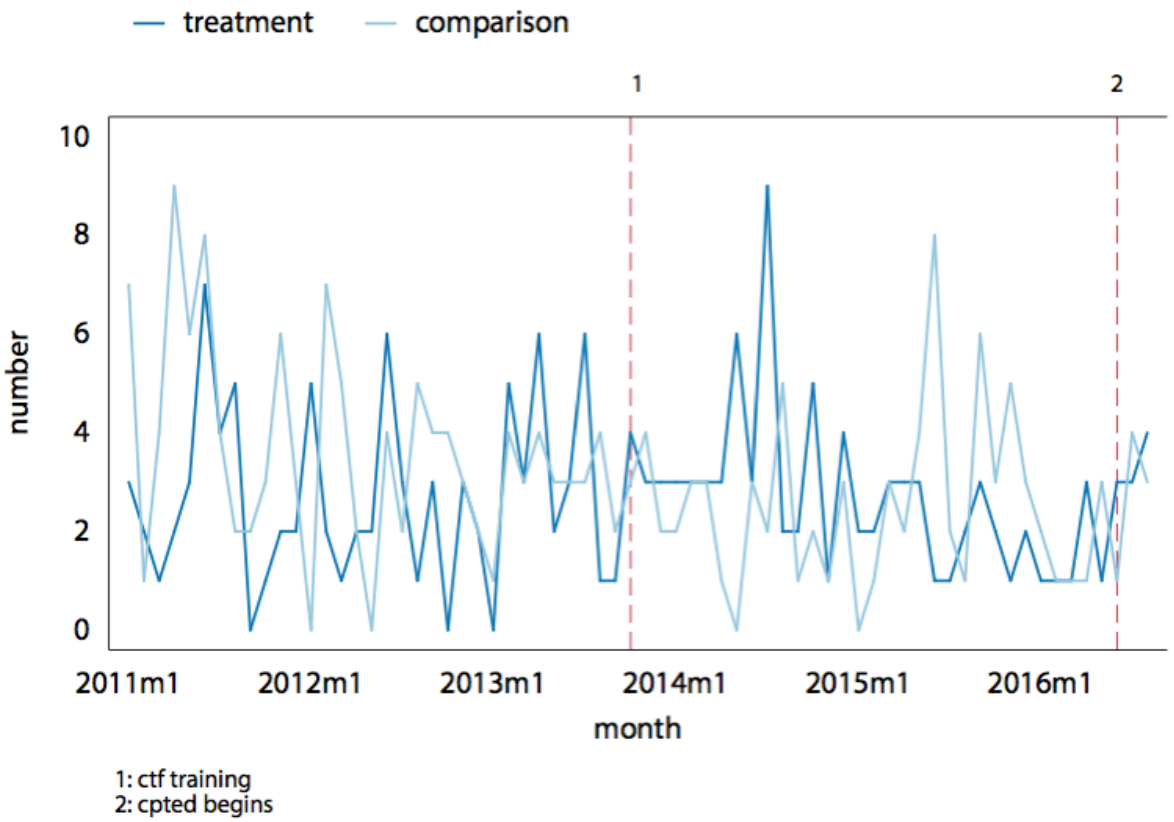


Figure 47: Part I violent incidents in treatment and comparison sites, January 2011–August 2016

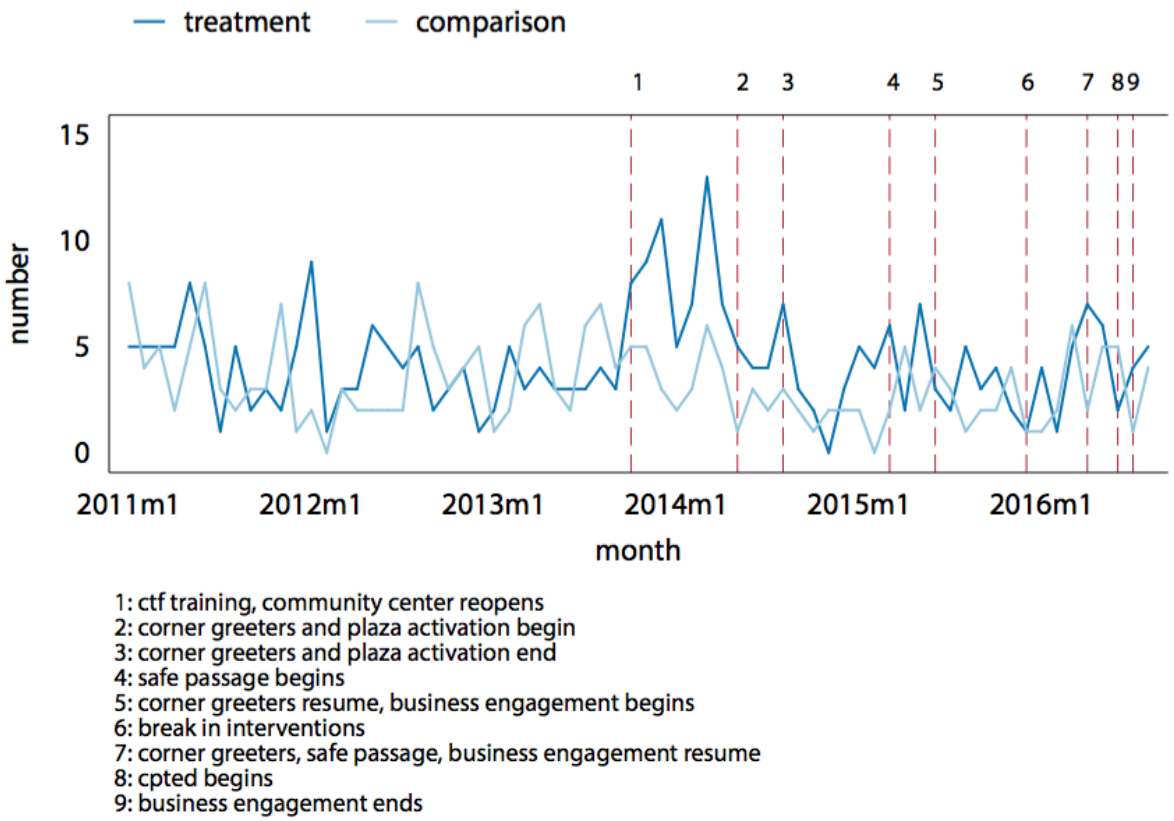
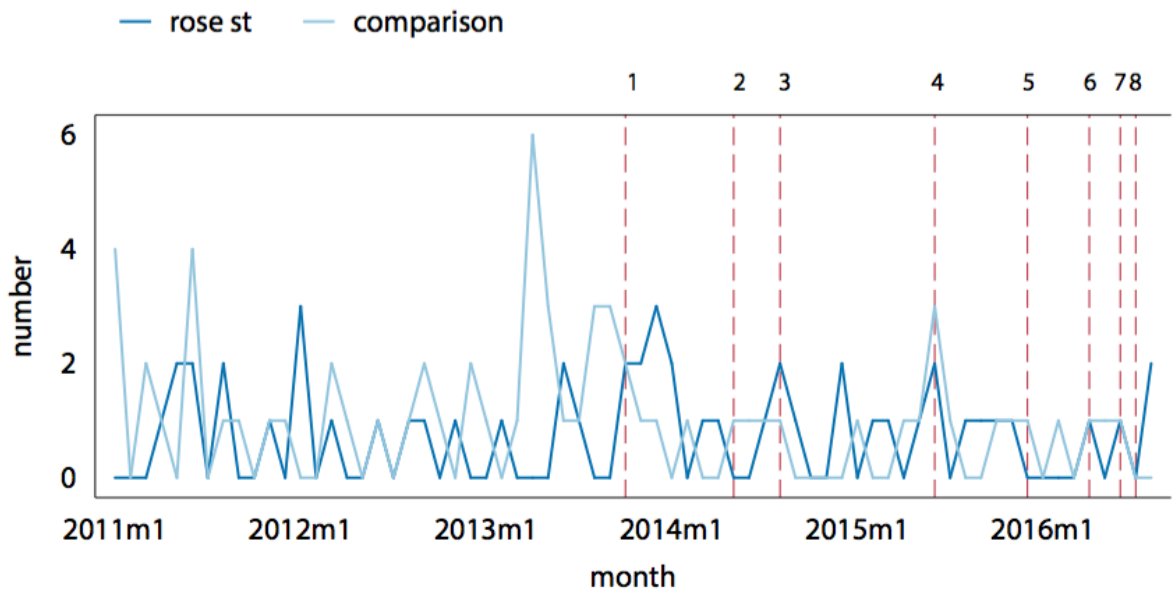


Figure 48: Part I violent incidents at Rose Street and comparison site, January 2011–August 2016



1: ctf training
2: corner greeters begin
3: corner greeters end
4: corner greeters resume, business engagement begins
5: break in interventions
6: corner greeters and business engagement resume
7: cpted begins
8: business engagement ends

Figure 49: Part I violent incidents at Rainier and Henderson and comparison site, January 2011–August 2016

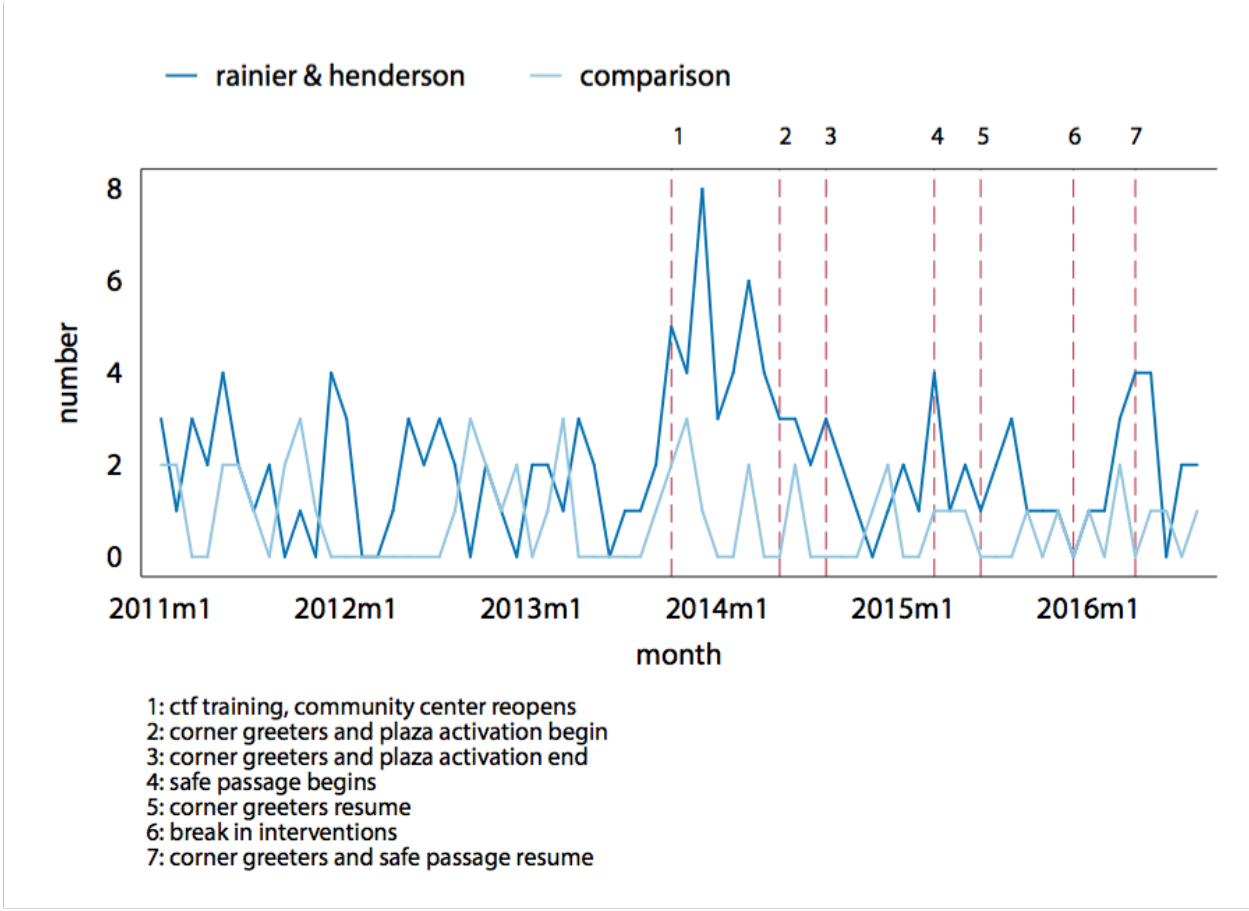


Figure 50: Part I violent incidents at Light Rail and comparison site, January 2011–August 2016

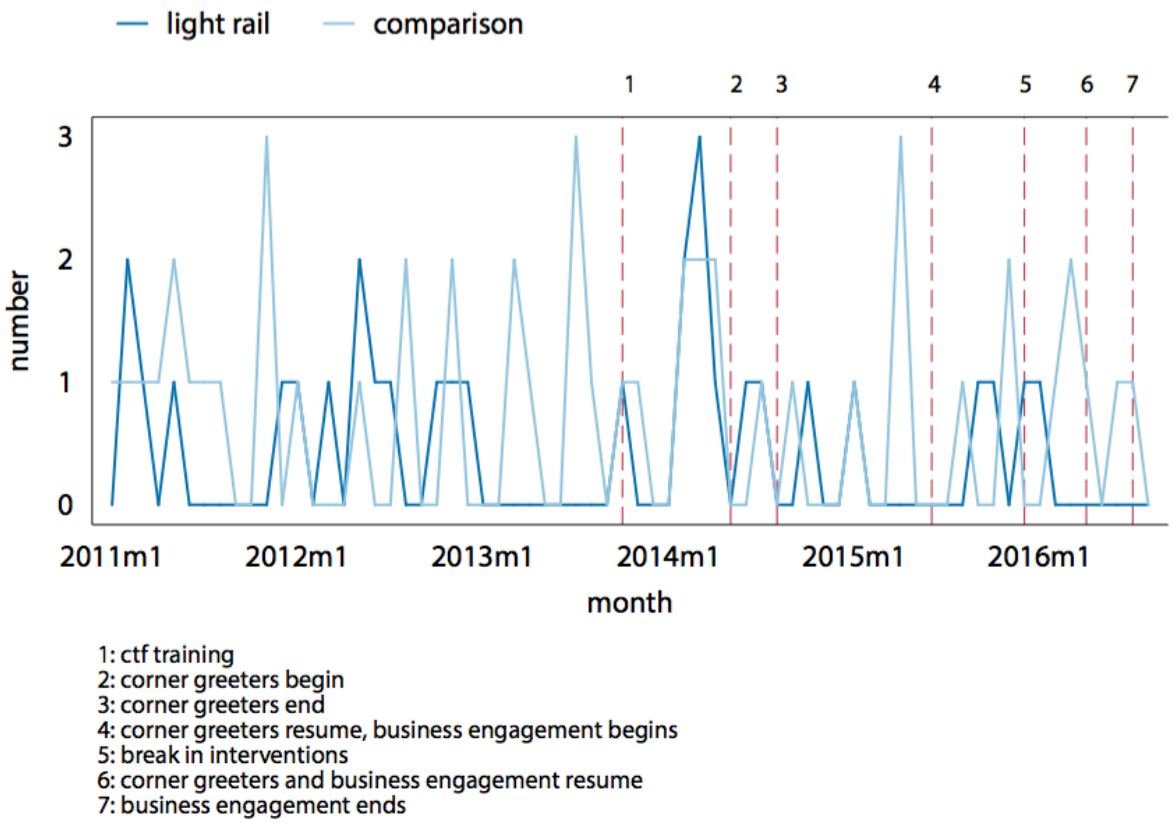


Figure 51: Part I violent incidents at Lake Washington and comparison site, January 2011–August 2016

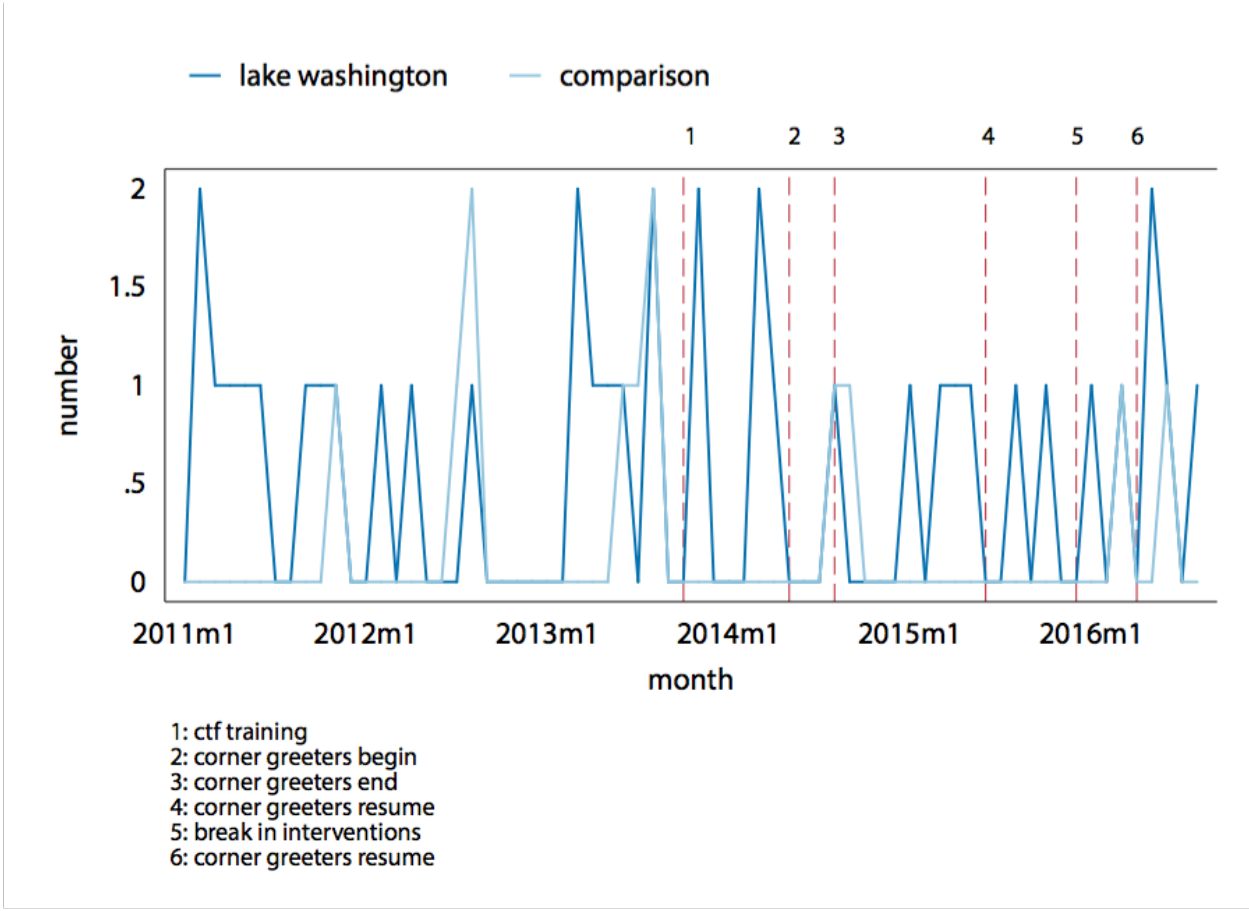


Figure 52: Part I violent incidents at Safeway and comparison site, January 2011–August 2016

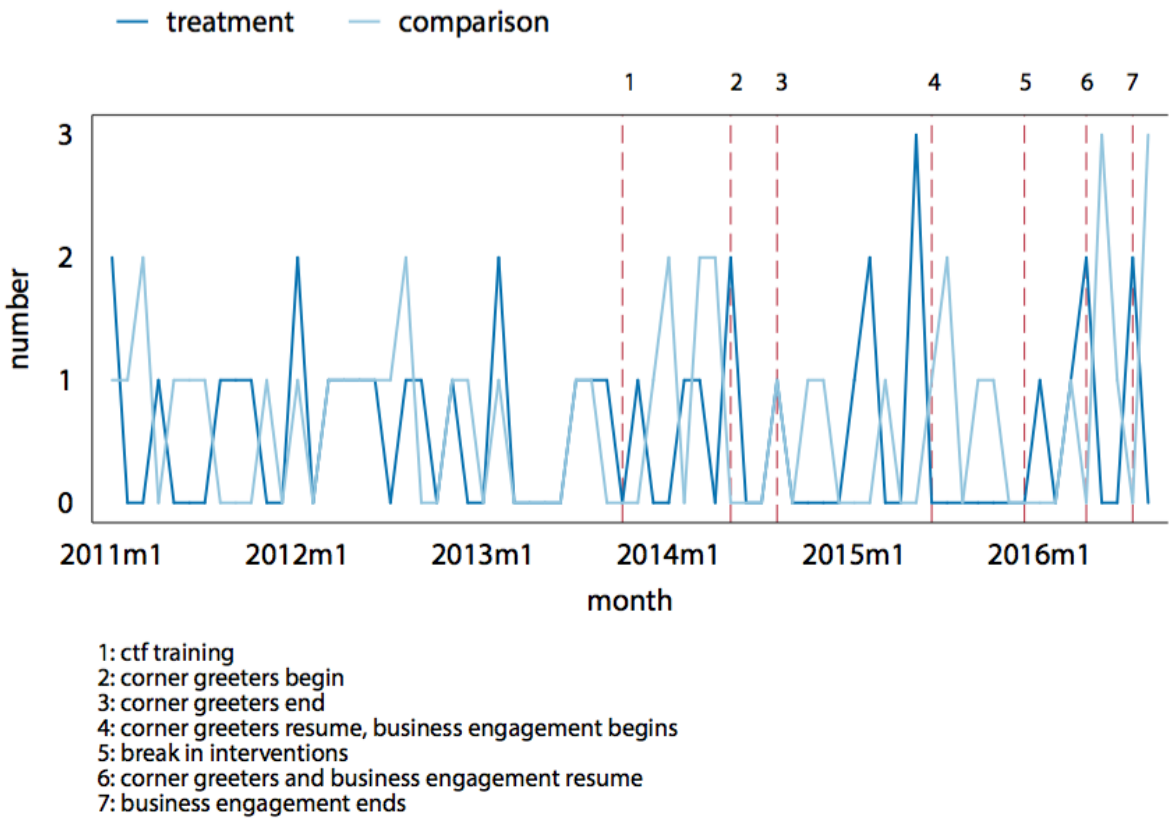


Figure 53: Part I violent incidents at Corner Greeter and comparison sites, January 2011–August 2016

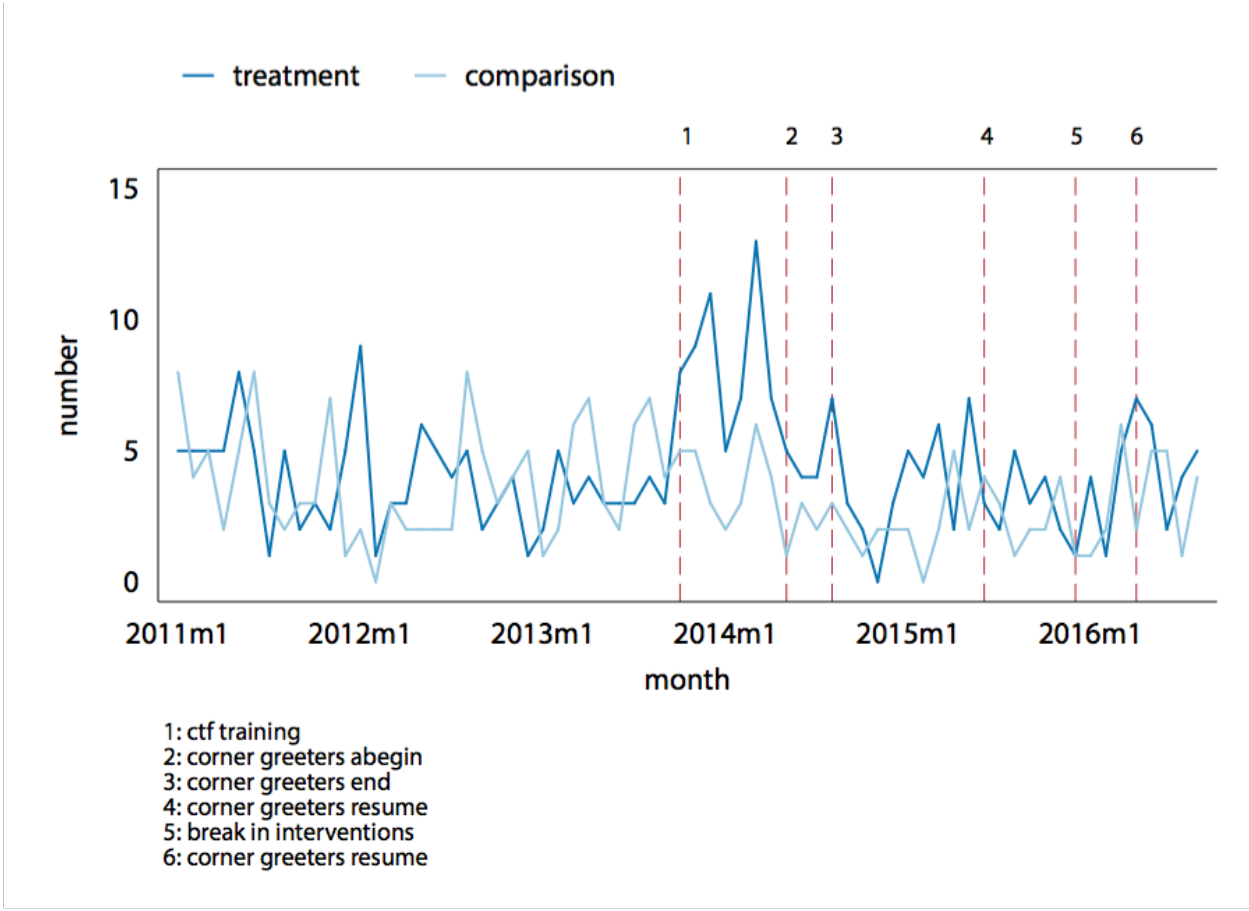


Figure 54: Part I violent incidents at Plaza Activation and comparison site, January 2011–August 2016

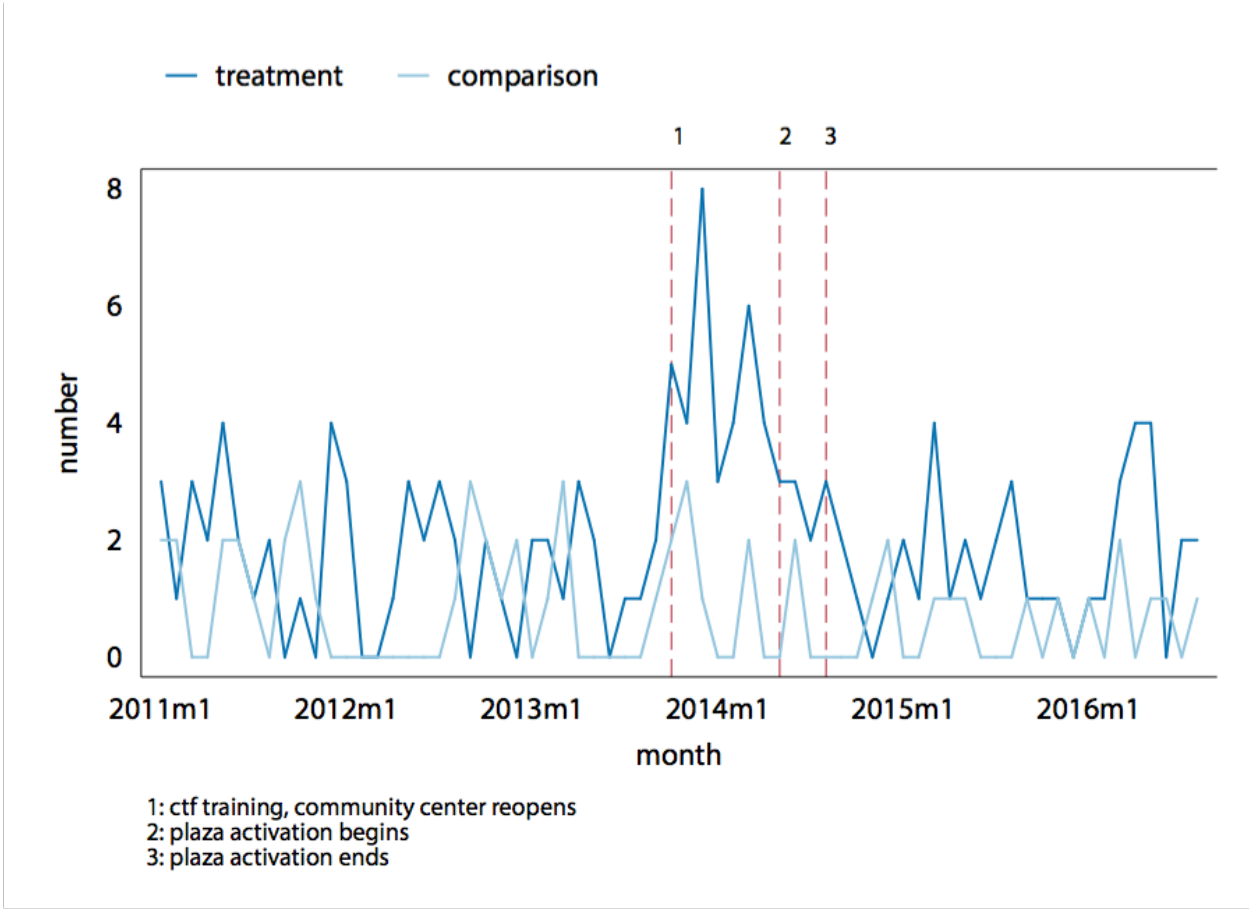


Figure 55: Part I violent incidents at Safe Passage/Campus Safety and comparison site, January 2011–August 2016

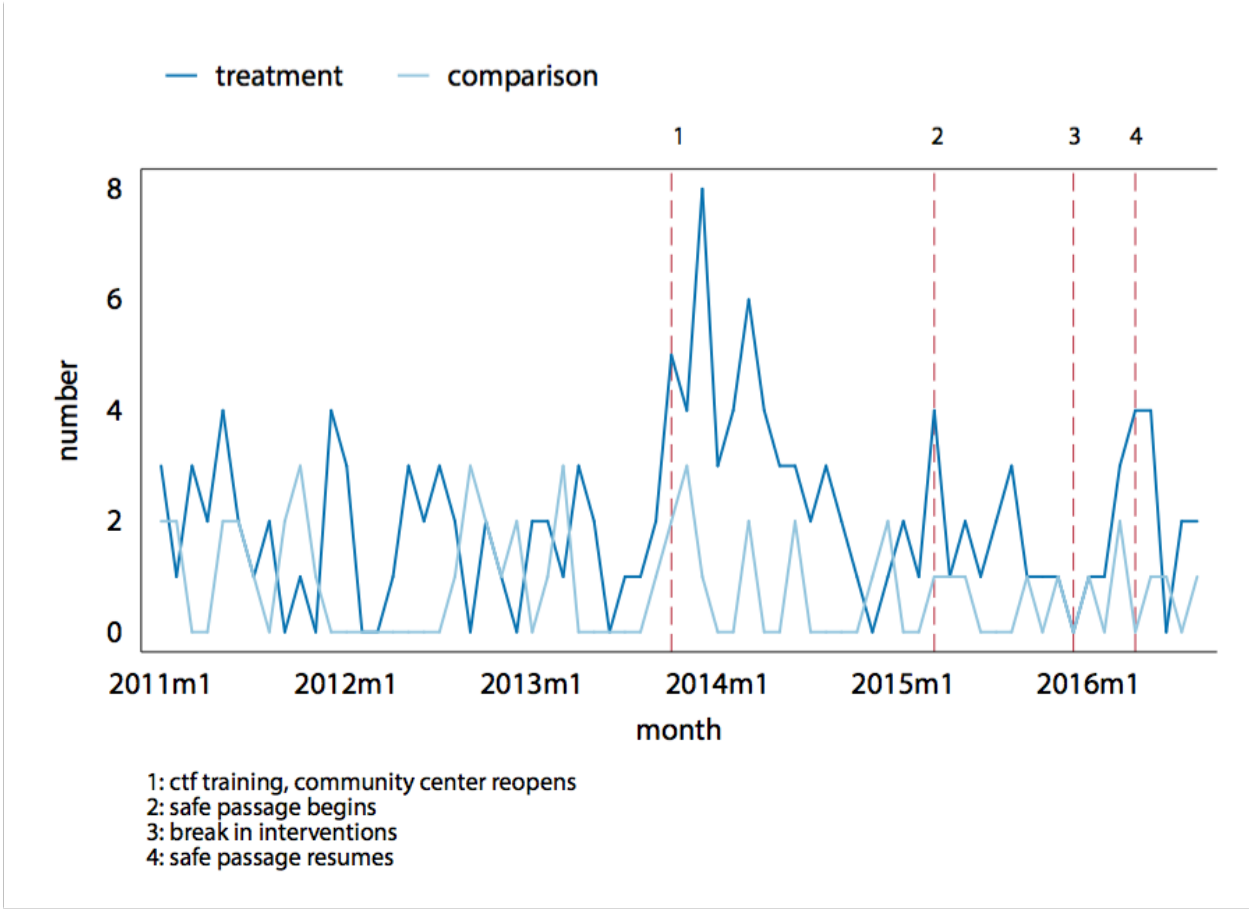


Figure 56: Part I violent incidents at Business Engagement and comparison sites, January 2011–August 2016

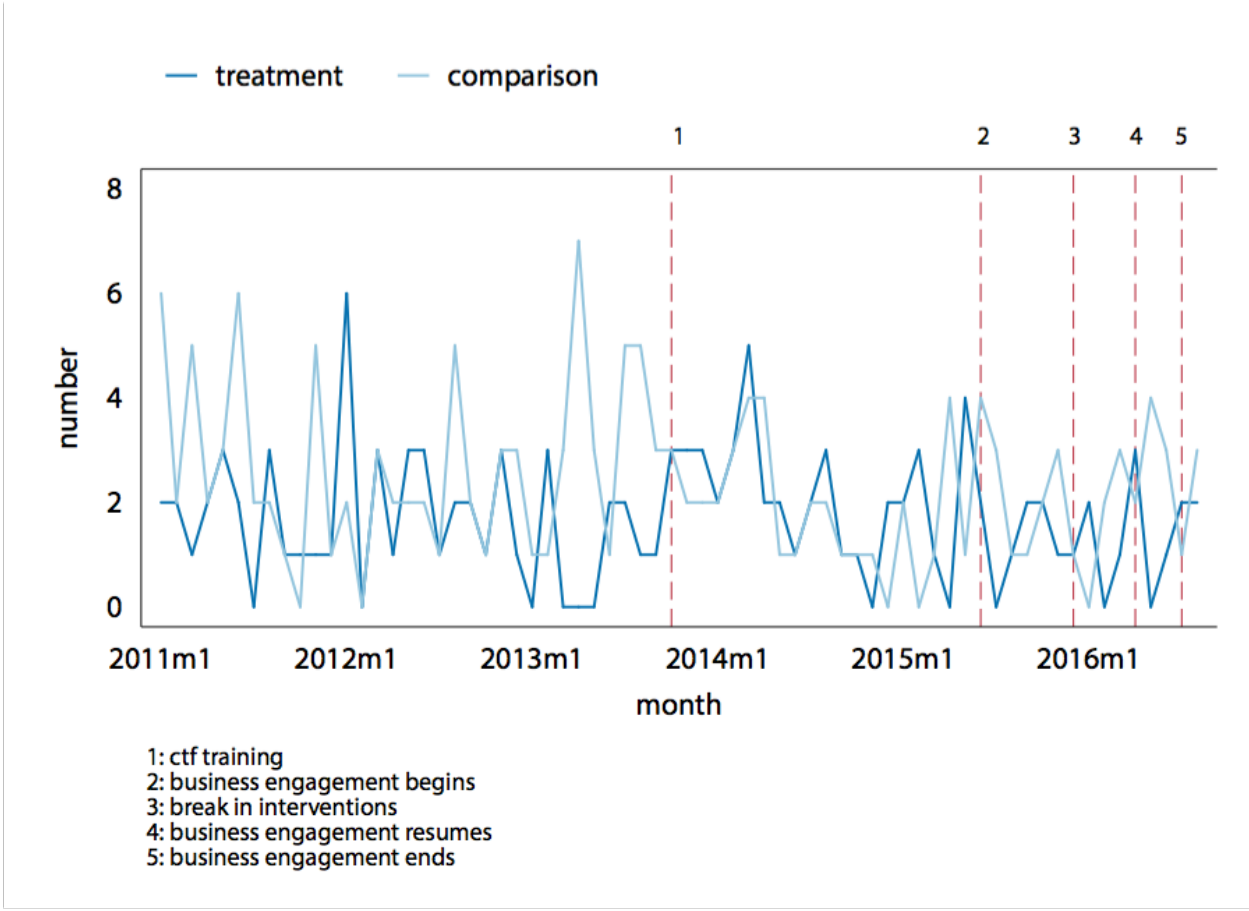


Figure 57: Part I violent incidents at CPTED and comparison sites, January 2011–August 2016

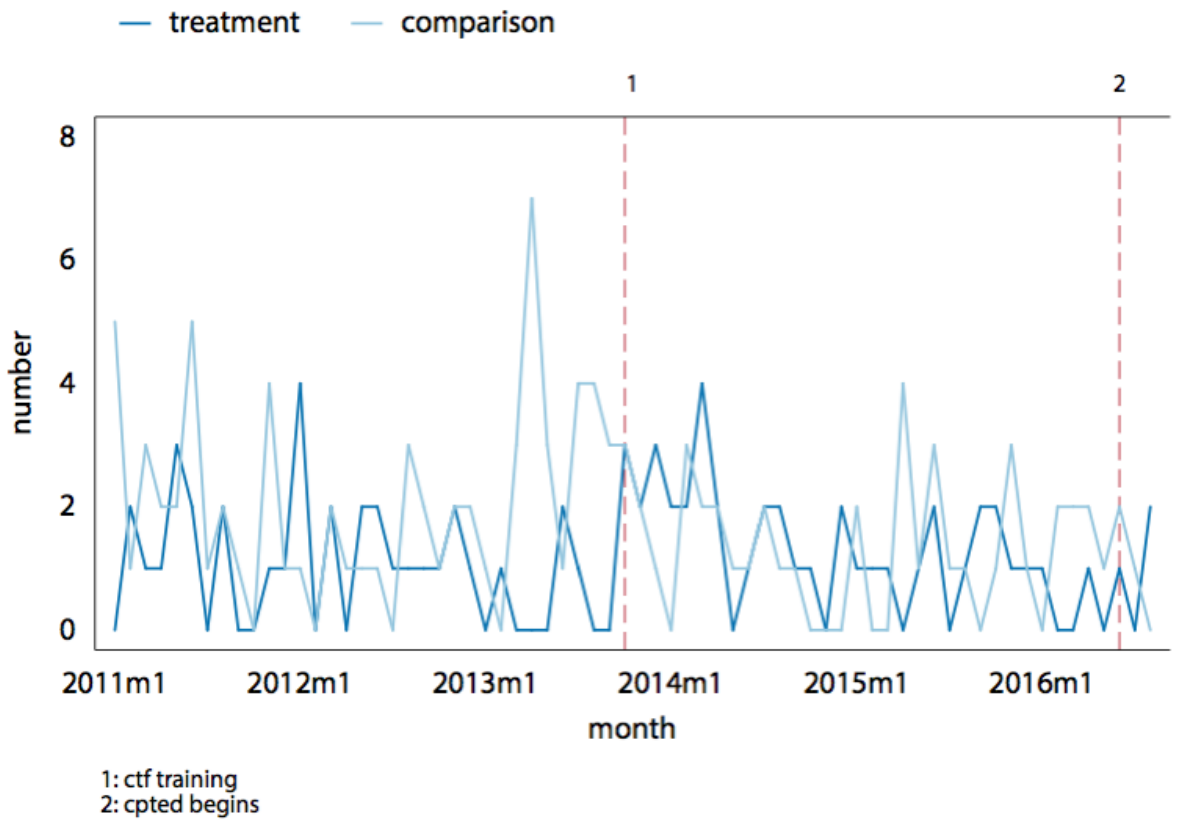


Figure 58: Part I property incidents in treatment and comparison sites, January 2011–August 2016

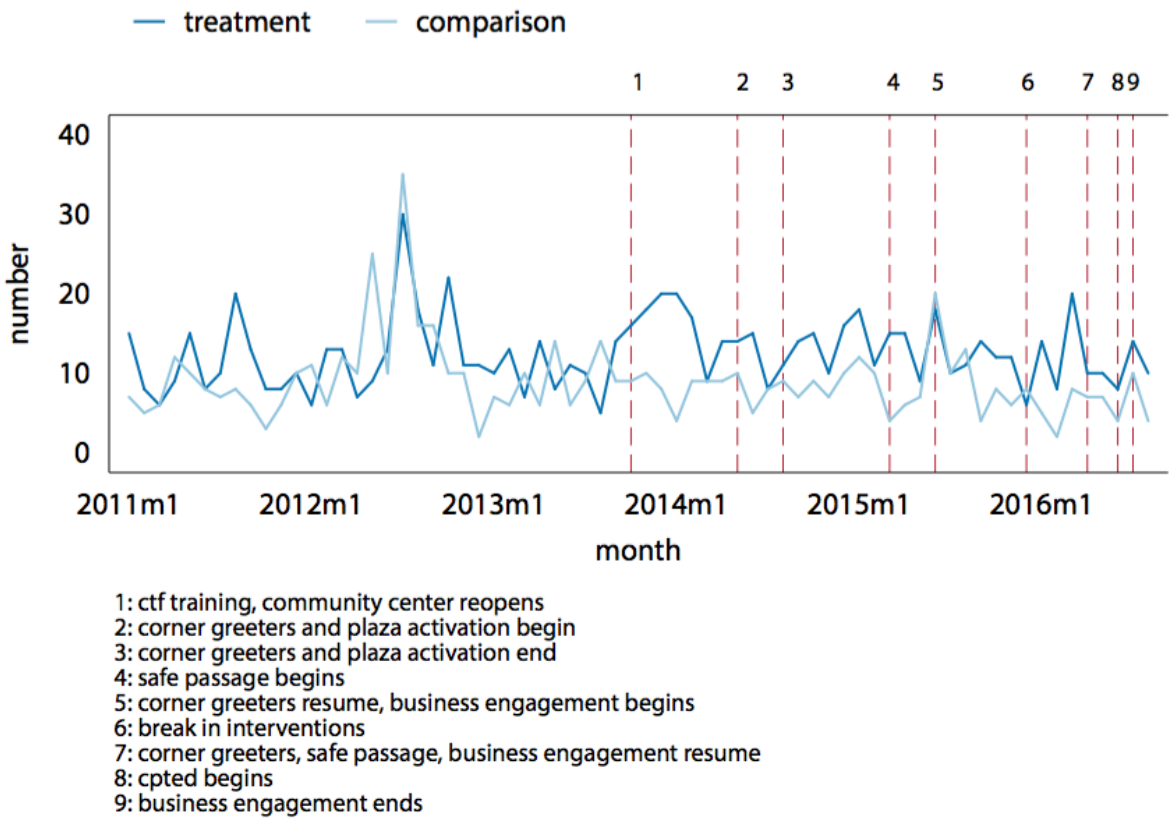


Figure 59: Part I property incidents at Rose Street and comparison site, January 2011–August 2016

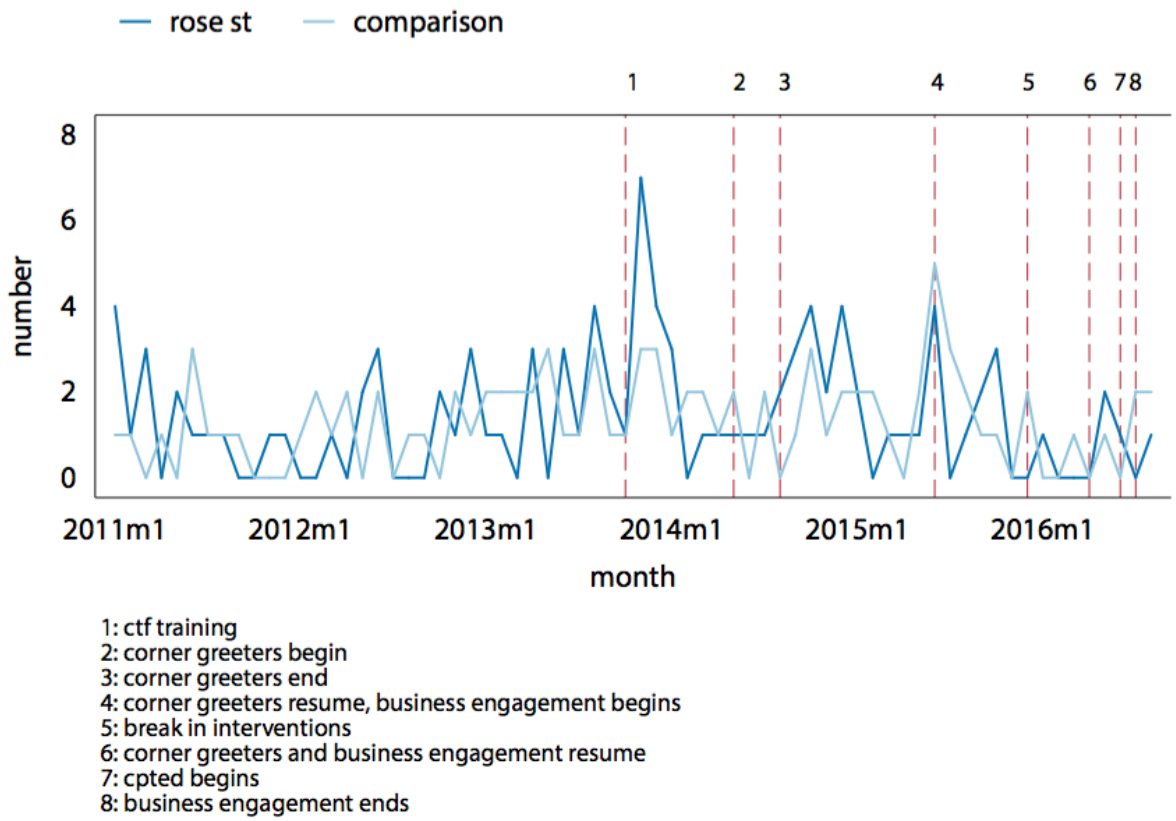


Figure 60: Part I property incidents at Rainier and Henderson and comparison site, January 2011–August 2016

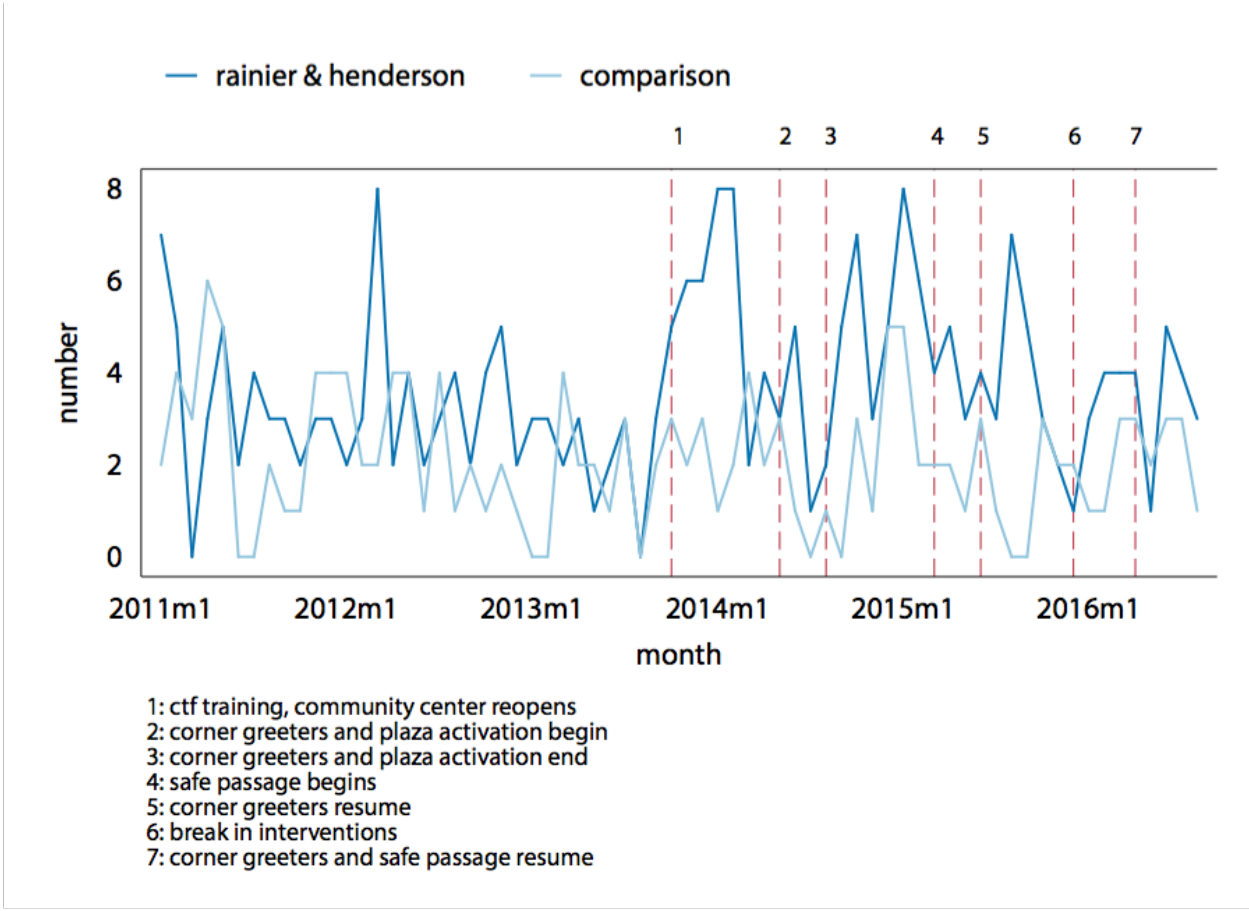


Figure 61: Part I property incidents at Light Rail and comparison site, January 2011–August 2016

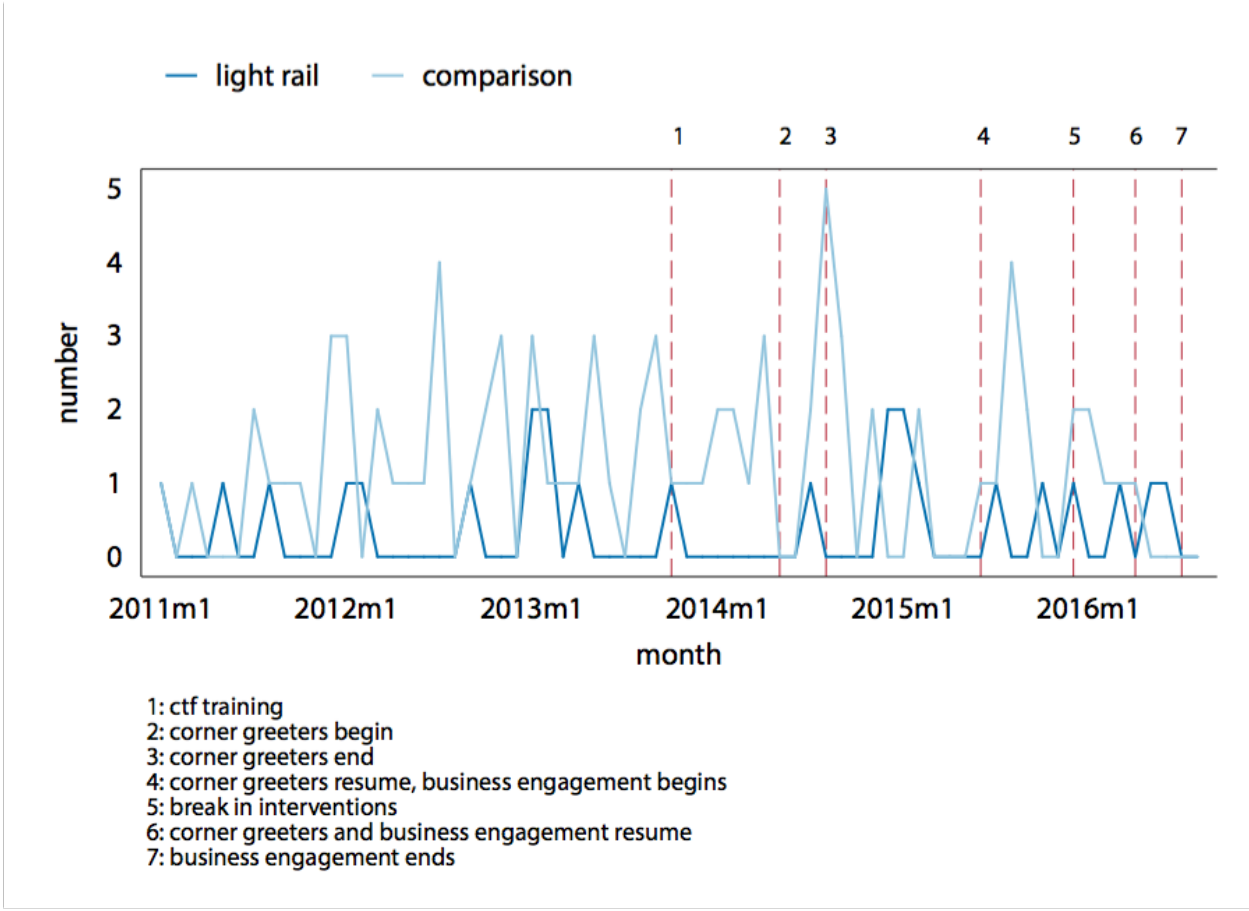


Figure 62: Part I property incidents at Lake Washington and comparison site, January 2011–August 2016

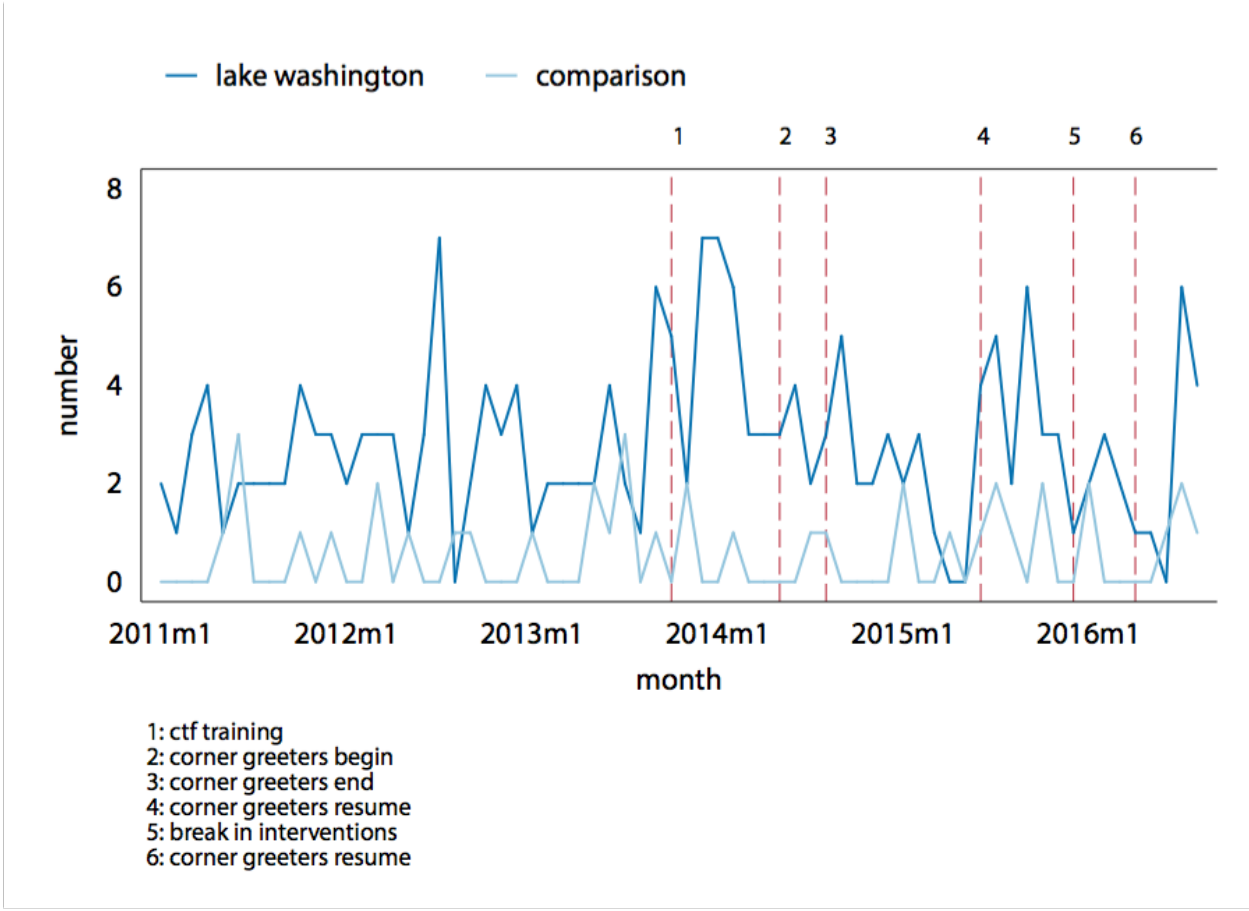


Figure 63: Part I property incidents at Safeway and comparison site, January 2011–August 2016

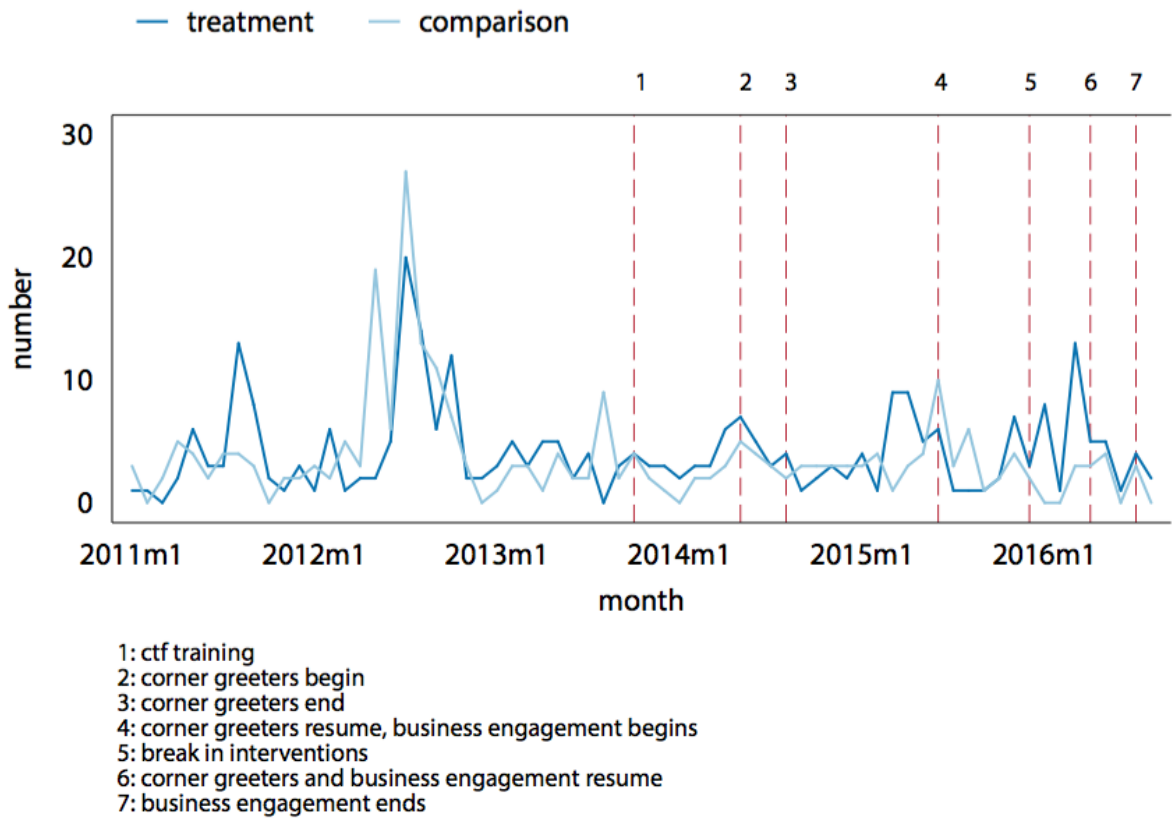


Figure 64: Part I property incidents at Corner Greeter and comparison sites, January 2011–August 2016

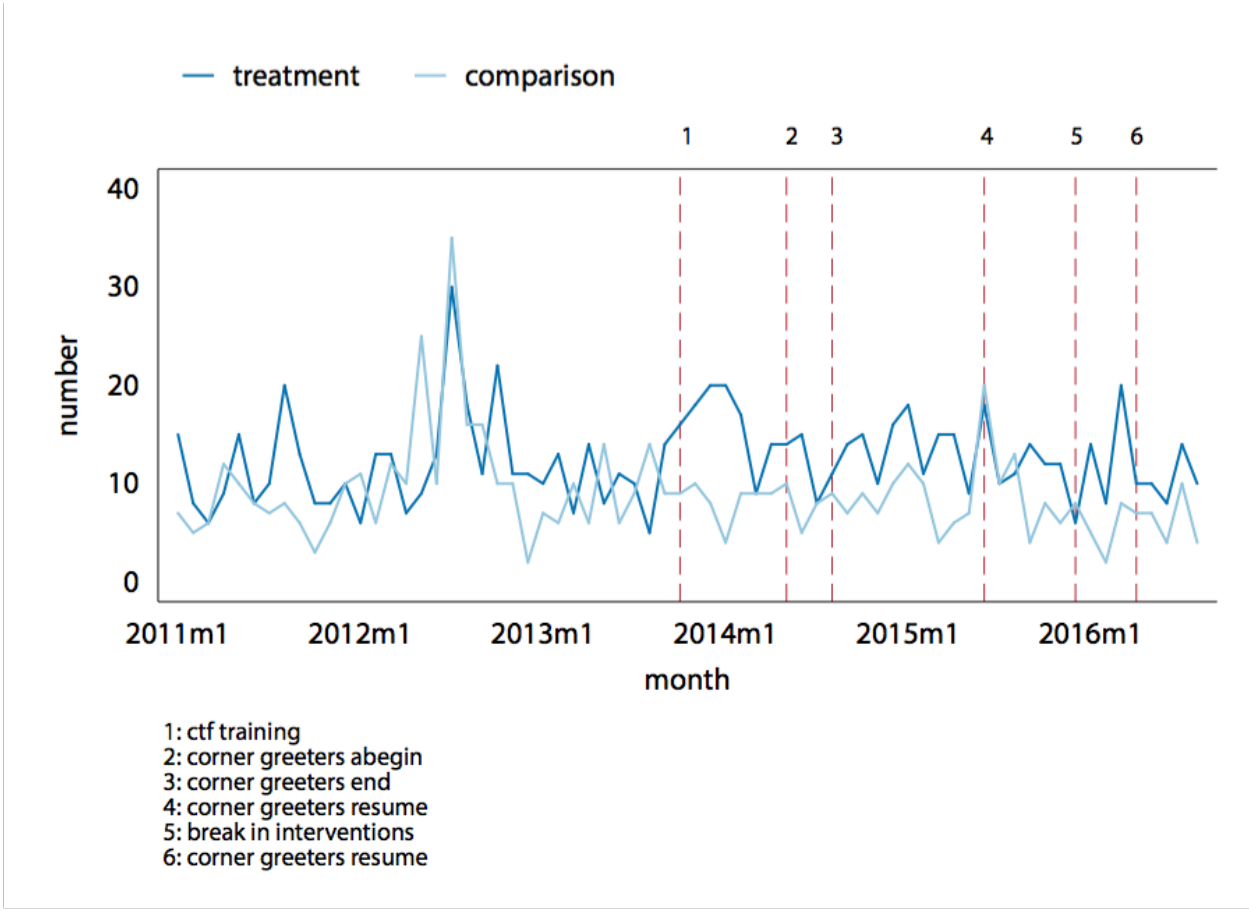


Figure 65: Part I property incidents at Plaza Activation and comparison site, January 2011–August 2016

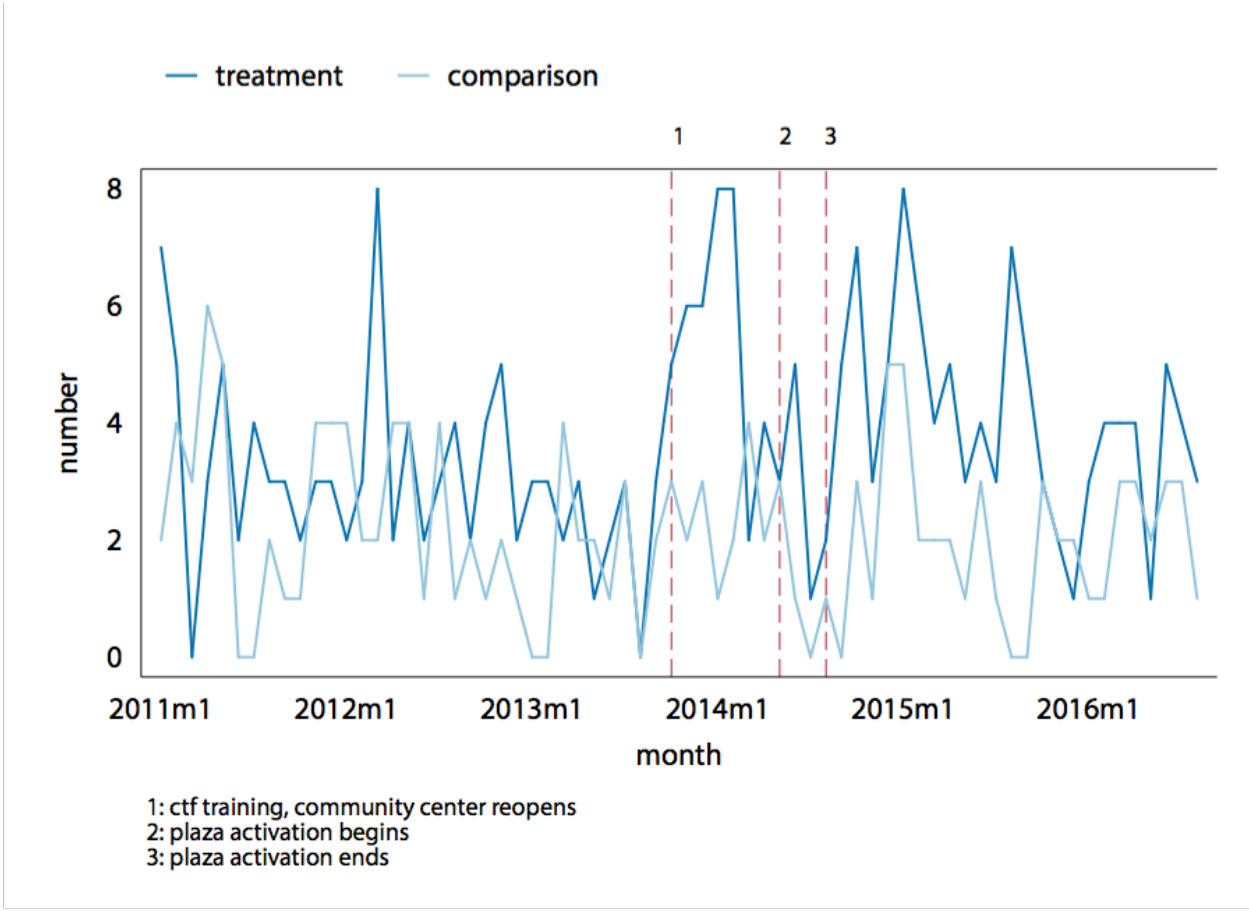


Figure 66: Part I property incidents at Safe Passage/Campus Safety and comparison site, January 2011–August 2016

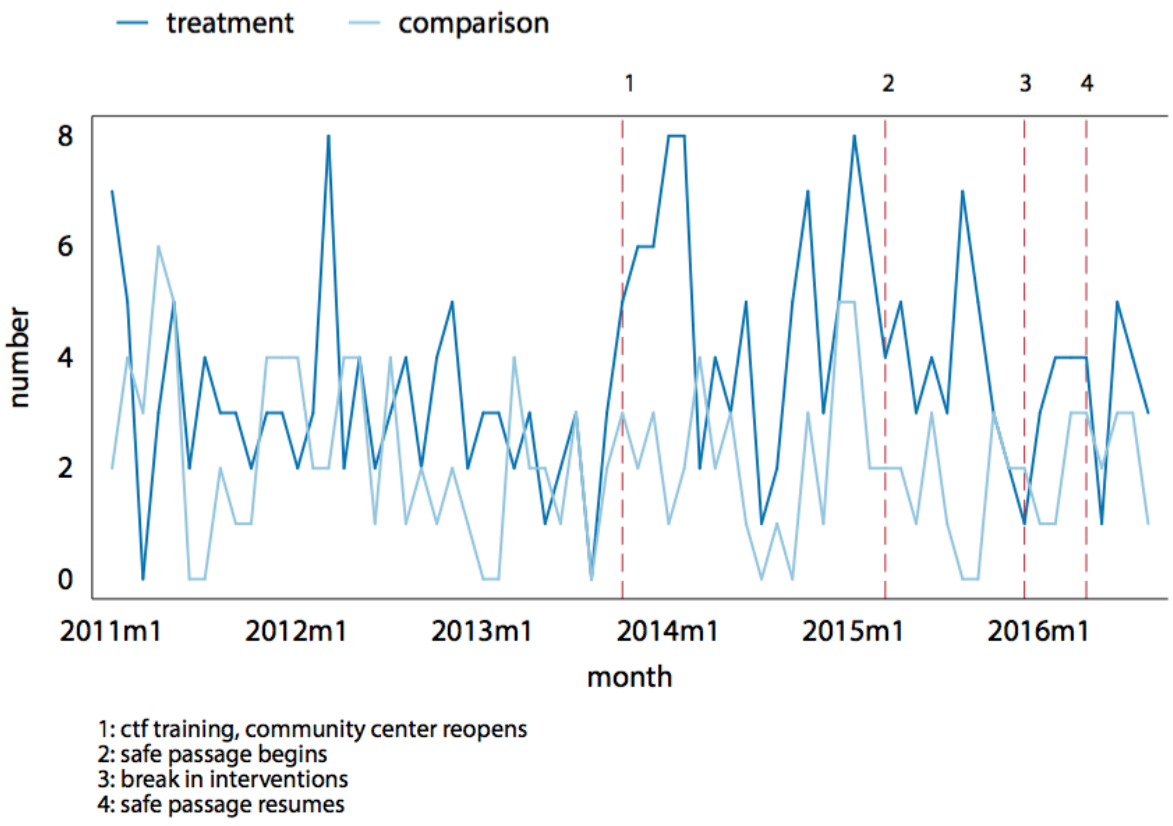


Figure 67: Part I property incidents at Business Engagement and comparison sites, January 2011–August 2016

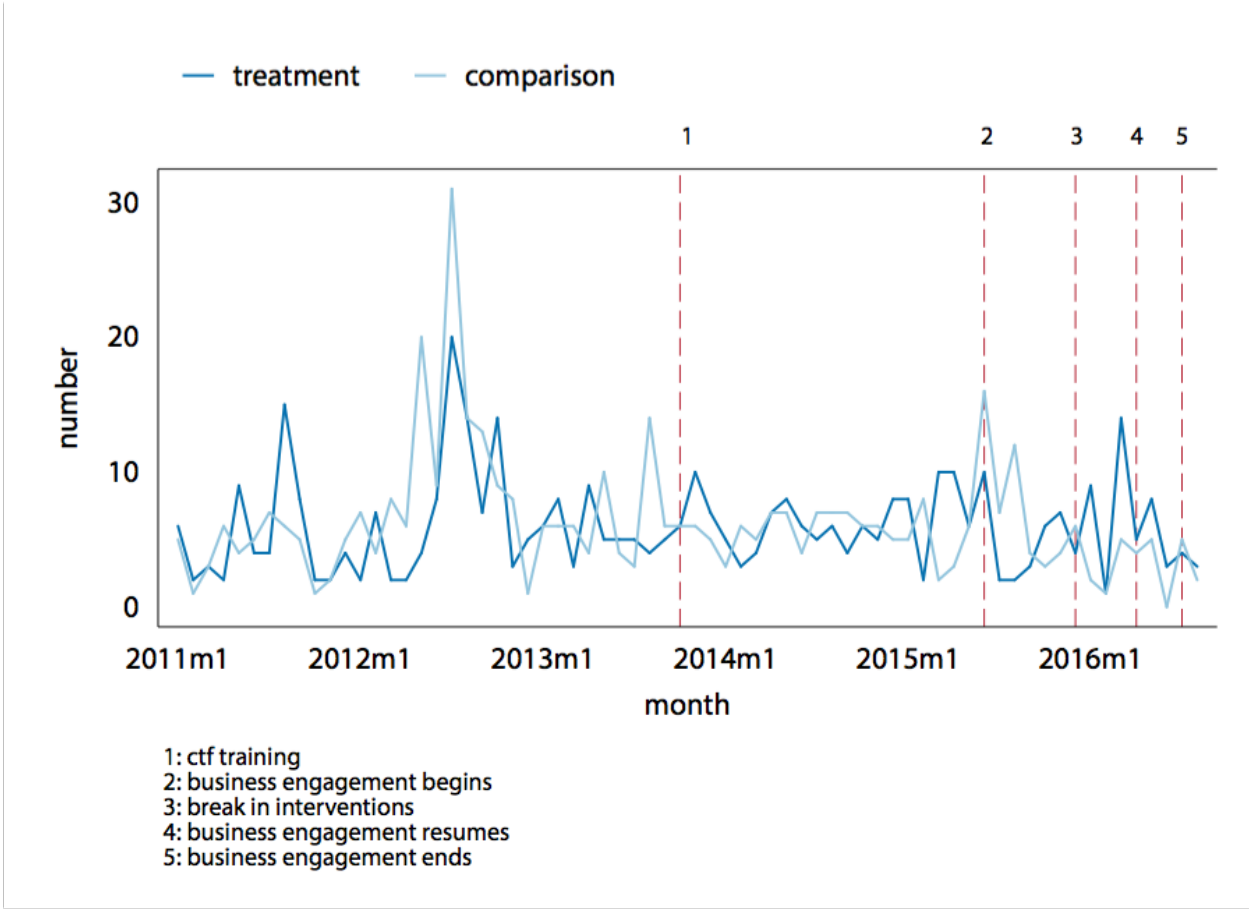


Figure 68: Part I property incidents at CPTED and comparison sites, January 2011–August 2016

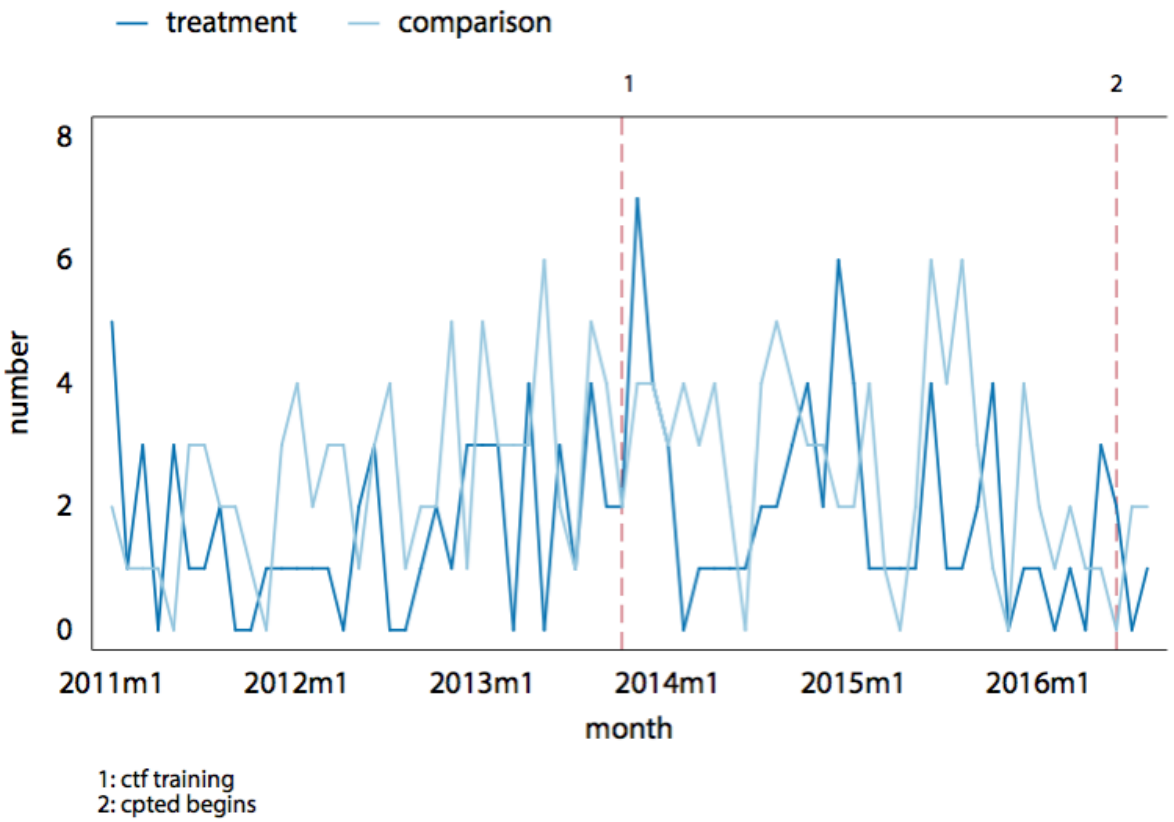


Figure 69: Violent incidents in treatment and comparison sites, January 2011–August 2016

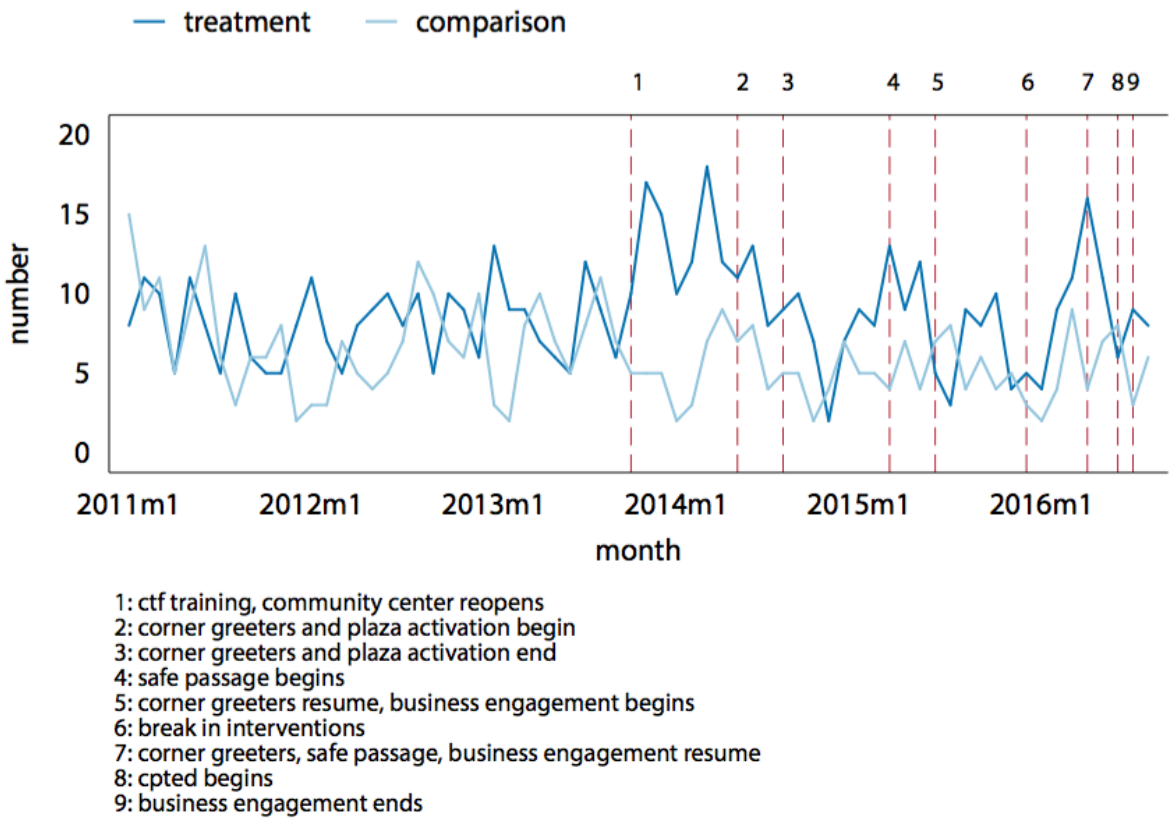
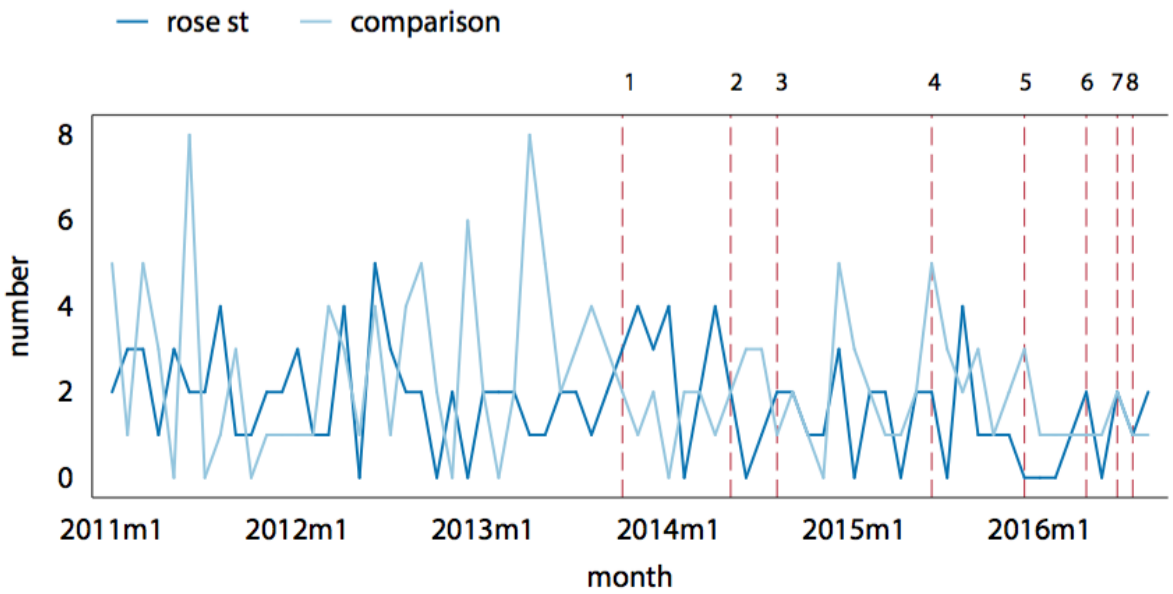


Figure 70: Violent incidents at Rose Street and comparison site, January 2011–August 2016



1: ctf training
2: corner greeters begin
3: corner greeters end
4: corner greeters resume, business engagement begins
5: break in interventions
6: corner greeters and business engagement resume
7: cpted begins
8: business engagement ends

Figure 71: Violent incidents at Rainier and Henderson and comparison site, January 2011–August 2016

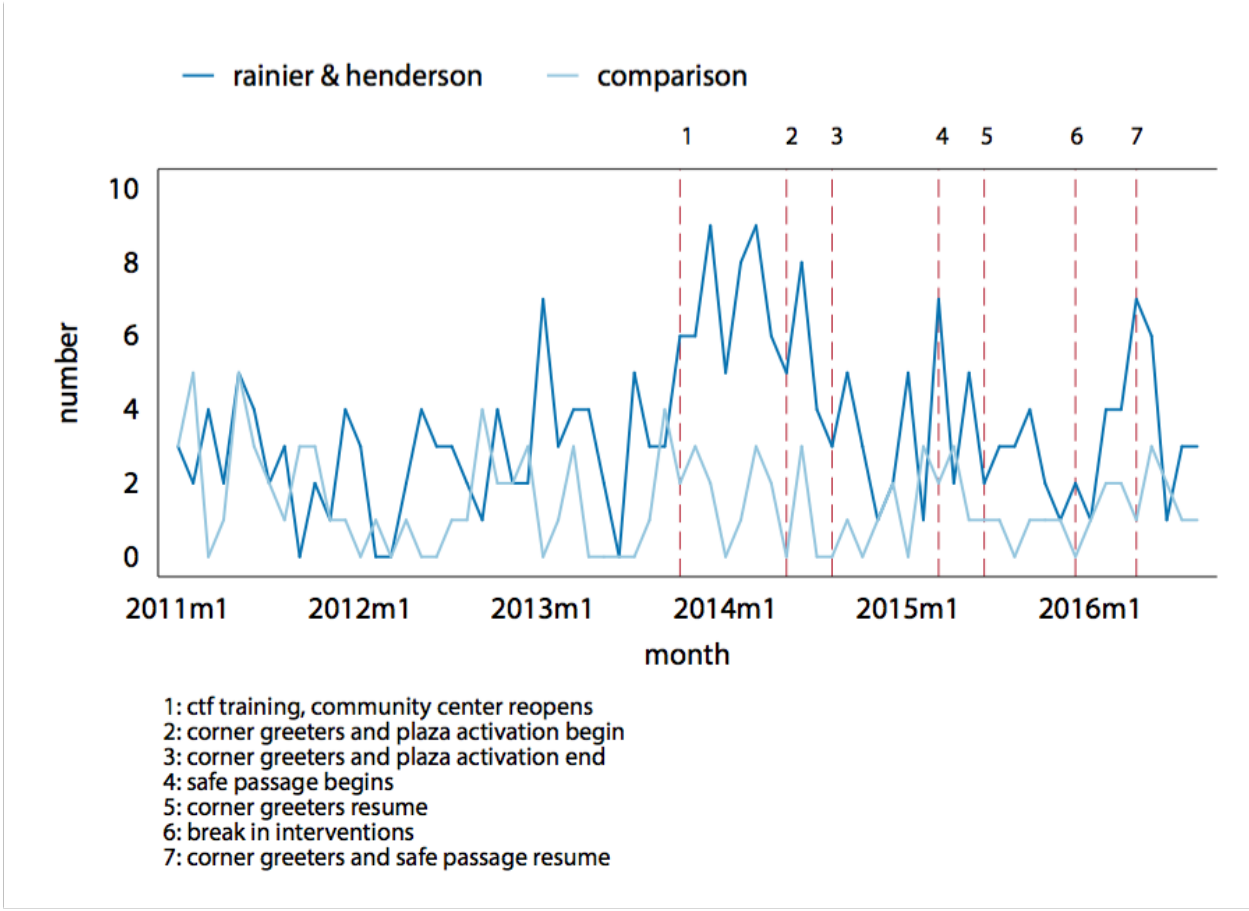


Figure 72: Violent incidents at Light Rail and comparison site, January 2011–August 2016

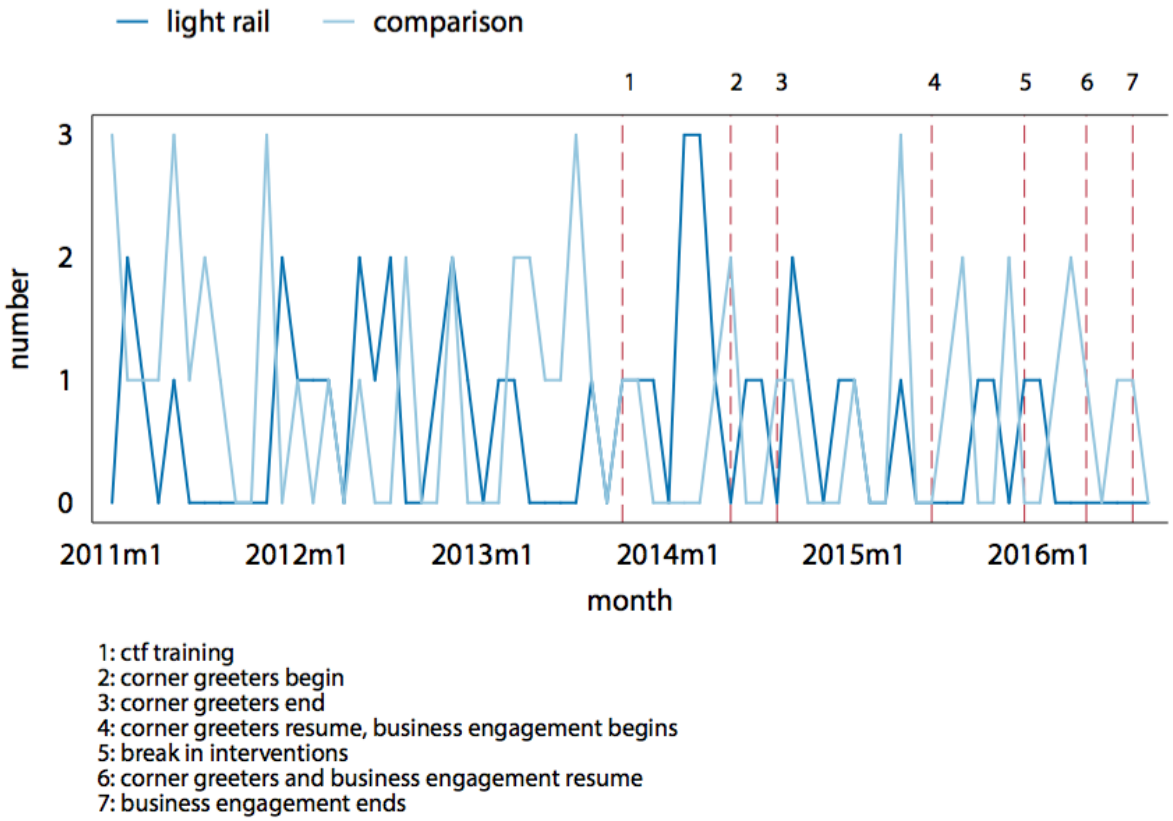


Figure 73: Violent incidents at Lake Washington and comparison site, January 2011–August 2016

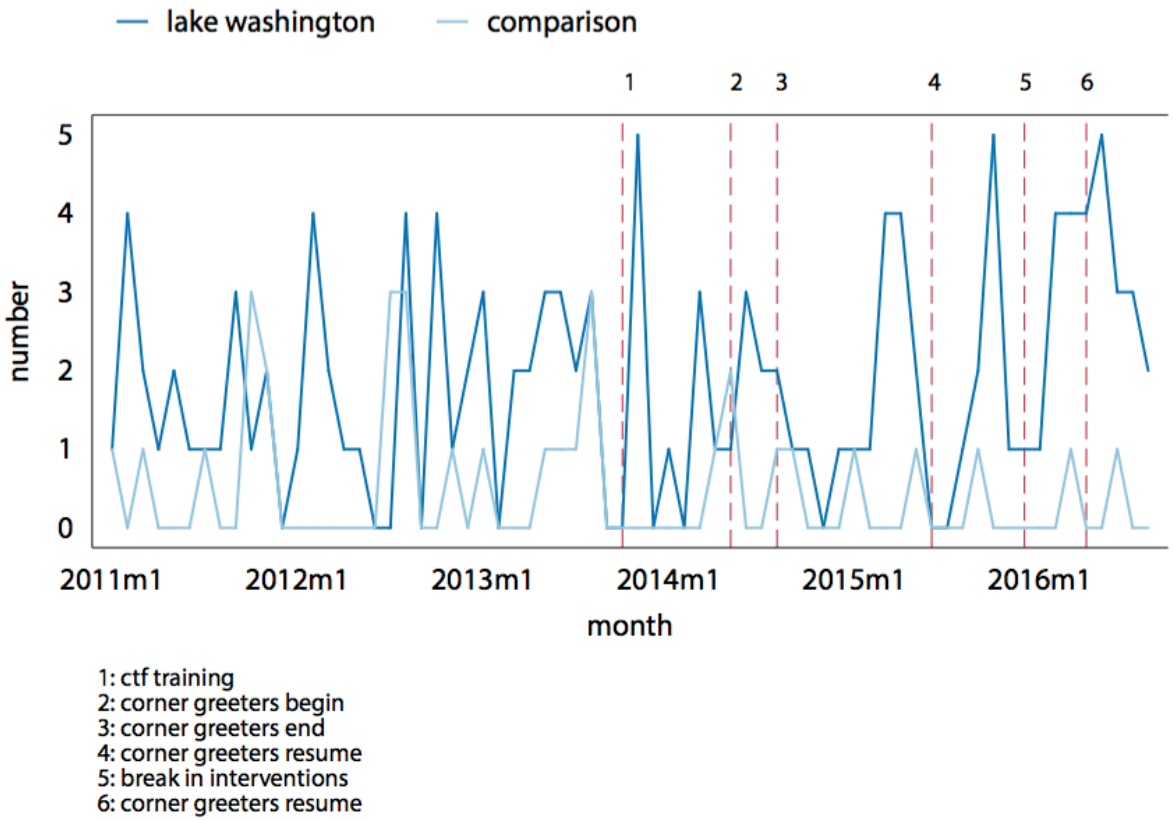


Figure 74: Violent incidents at Safeway and comparison site, January 2011–August 2016

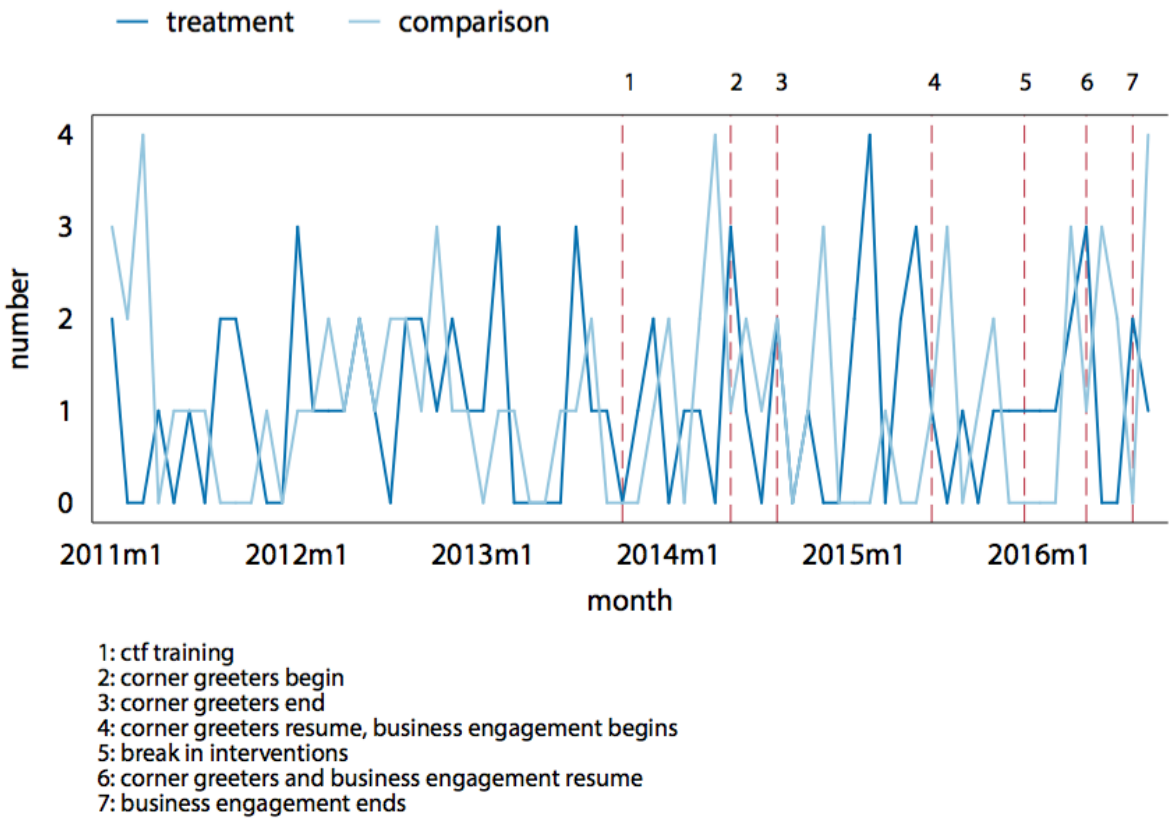


Figure 75: Violent incidents at Corner Greeter and comparison sites, January 2011–August 2016

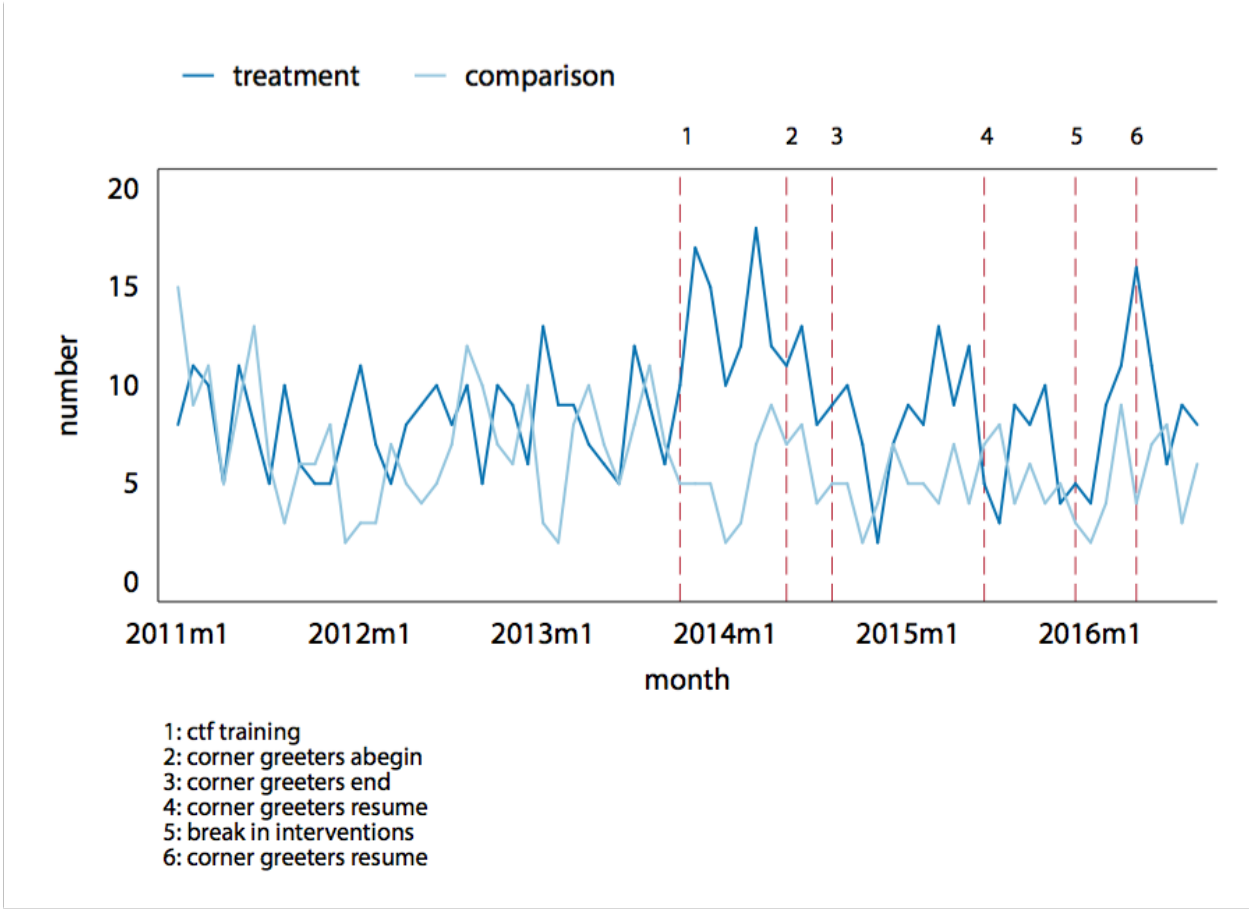


Figure 76: Violent incidents at Plaza Activation and comparison site, January 2011–August 2016

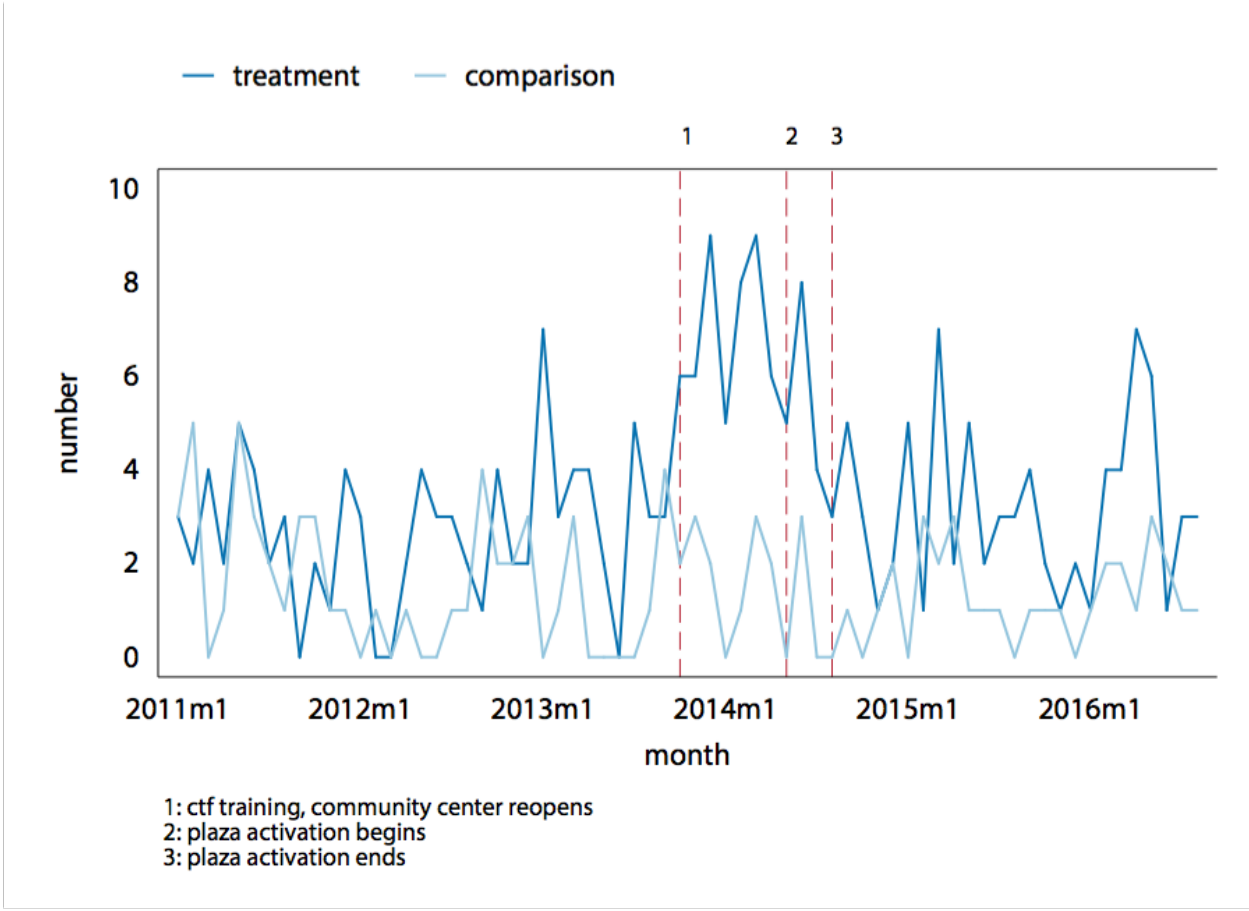


Figure 77: Violent incidents at Safe Passage/Campus Safety and comparison site, January 2011–August 2016

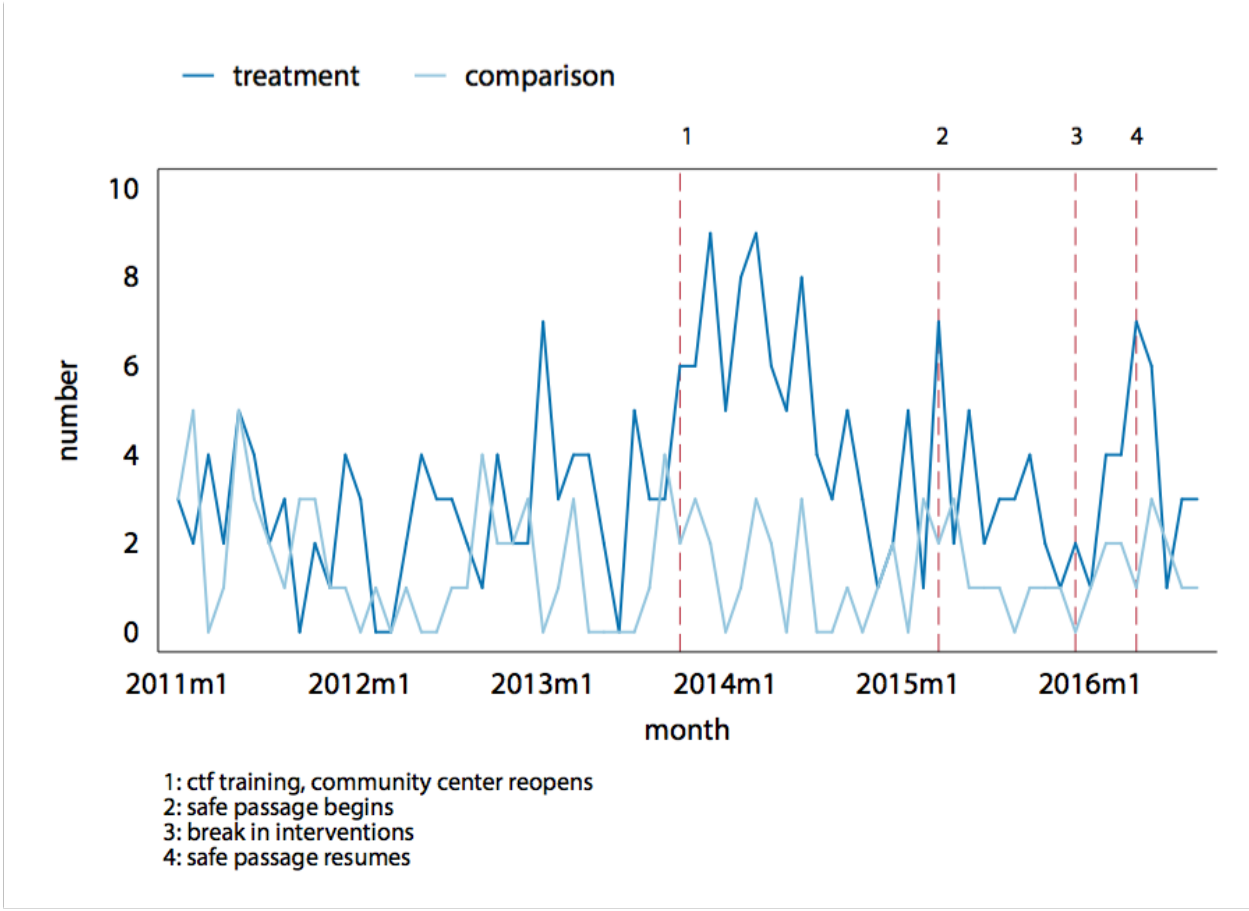


Figure 78: Violent incidents at Business Engagement and comparison sites, January 2011–August 2016

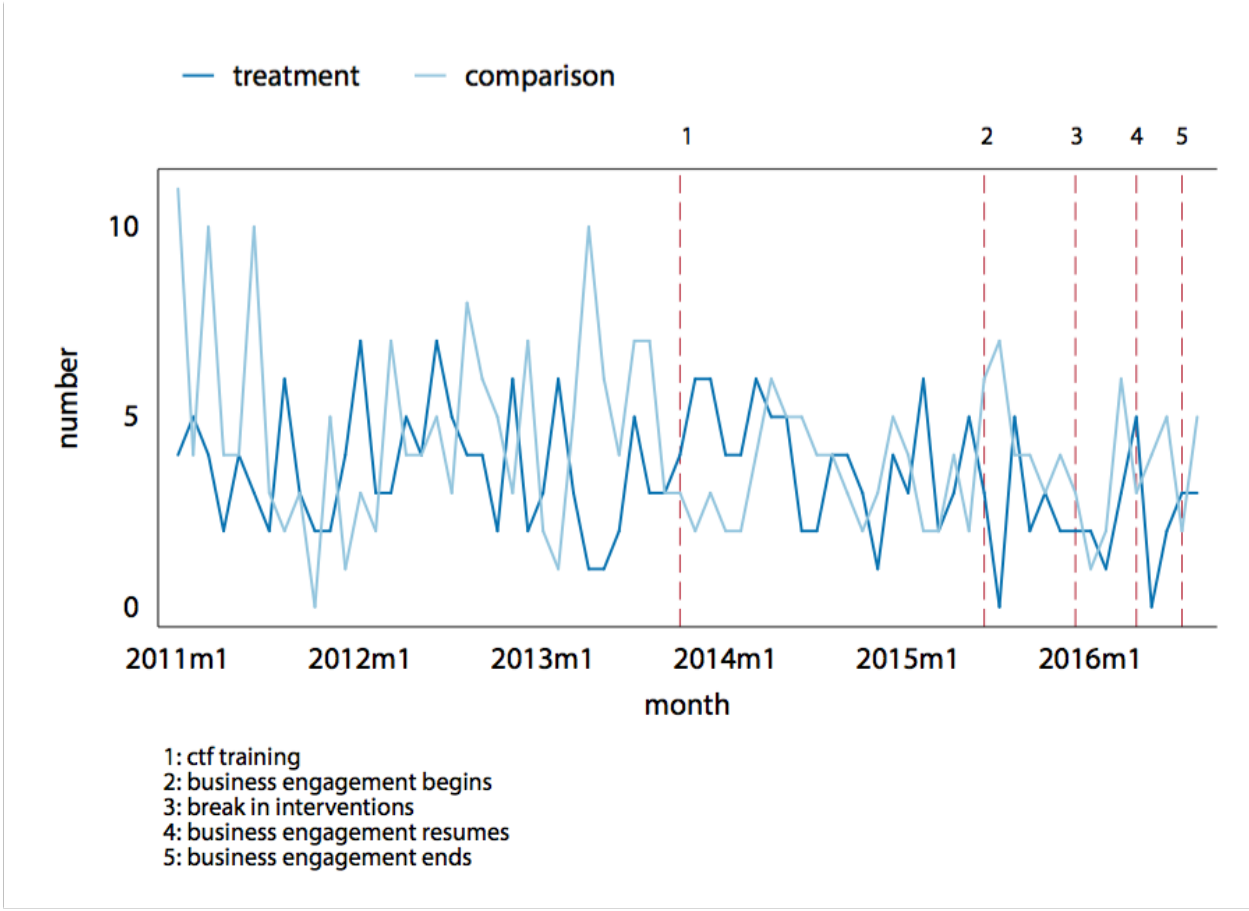


Figure 79: Violent incidents at CPTED and comparison sites, January 2011–August 2016

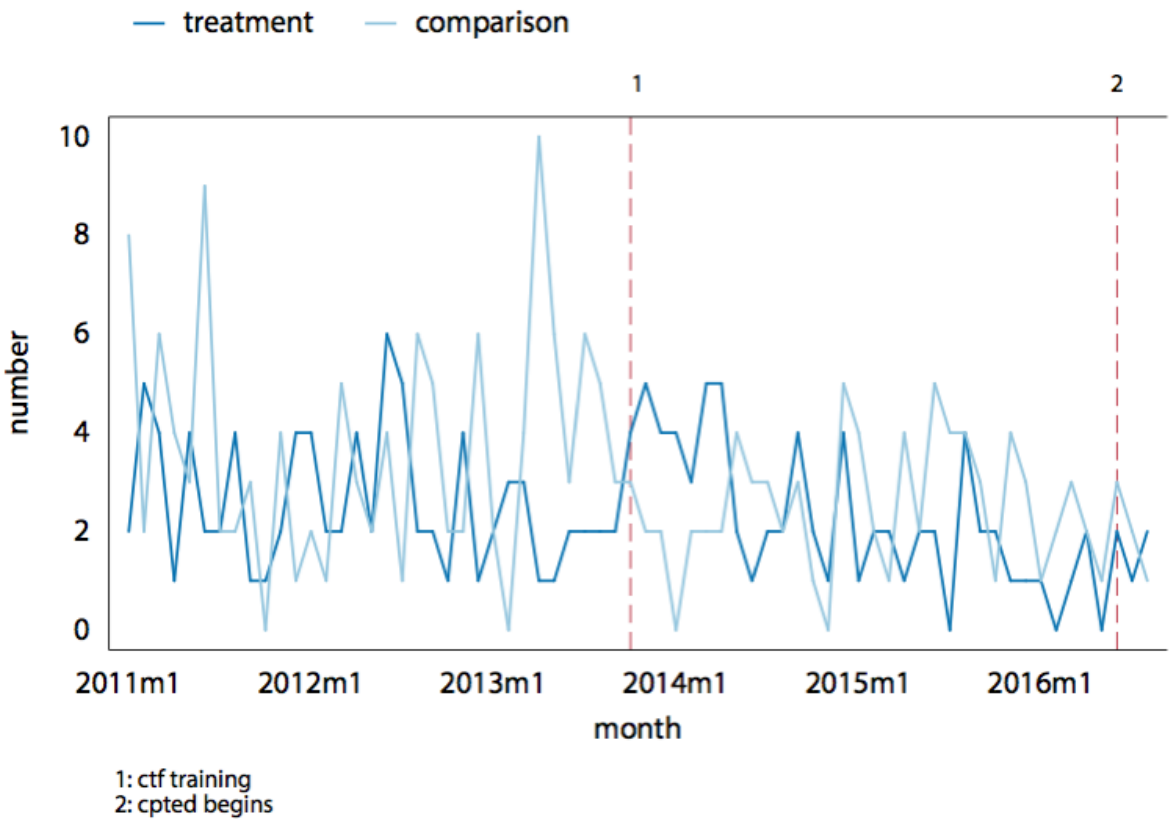
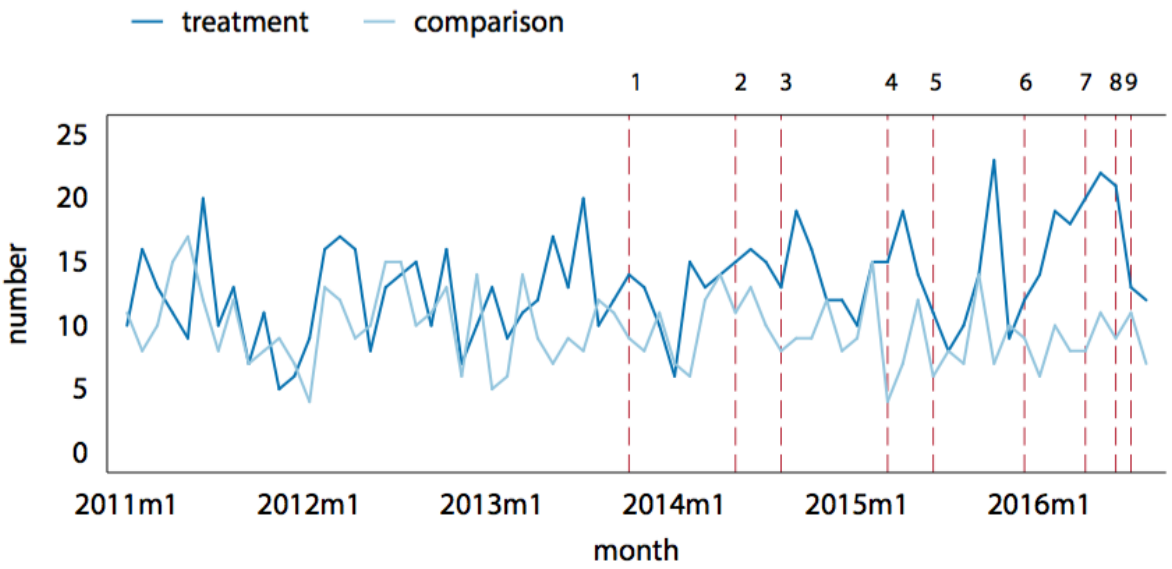


Figure 80: Part II incidents in treatment and comparison sites, January 2011–August 2016



1: ctf training, community center reopens
2: corner greeters and plaza activation begin
3: corner greeters and plaza activation end
4: safe passage begins
5: corner greeters resume, business engagement begins
6: break in interventions
7: corner greeters, safe passage, business engagement resume
8: cpted begins
9: business engagement ends

Figure 81: Part II incidents at Rose Street and comparison site, January 2011–August 2016

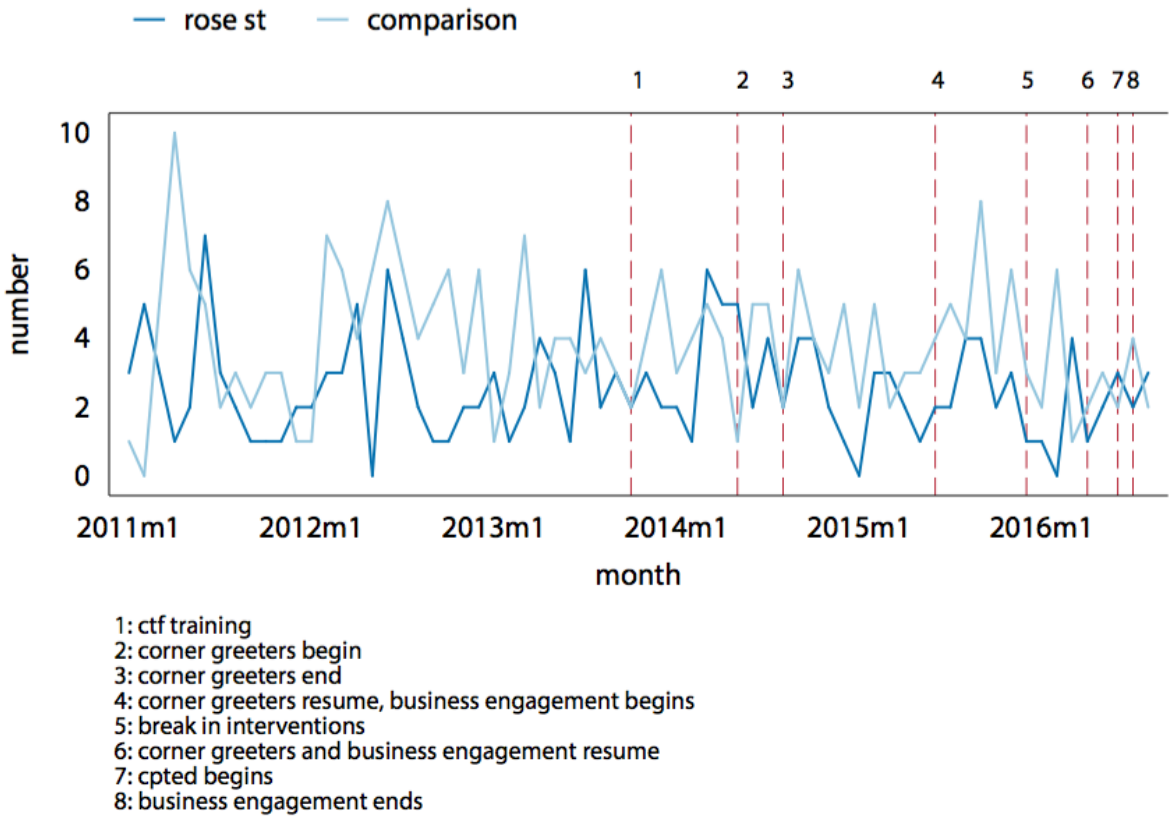


Figure 82: Part II incidents at Rainier and Henderson and comparison site, January 2011–August 2016

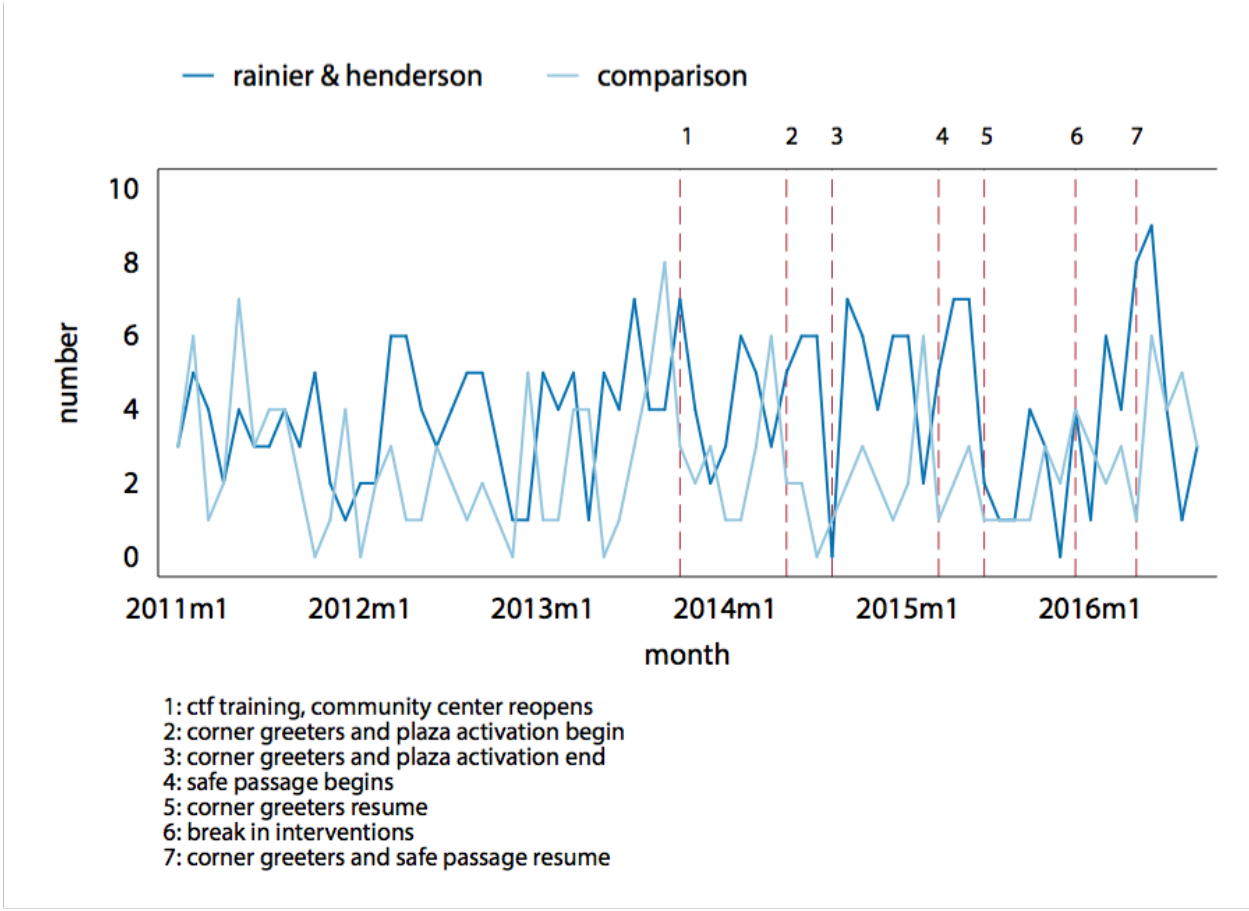


Figure 83: Part II incidents at Light Rail and comparison site, January 2011–August 2016

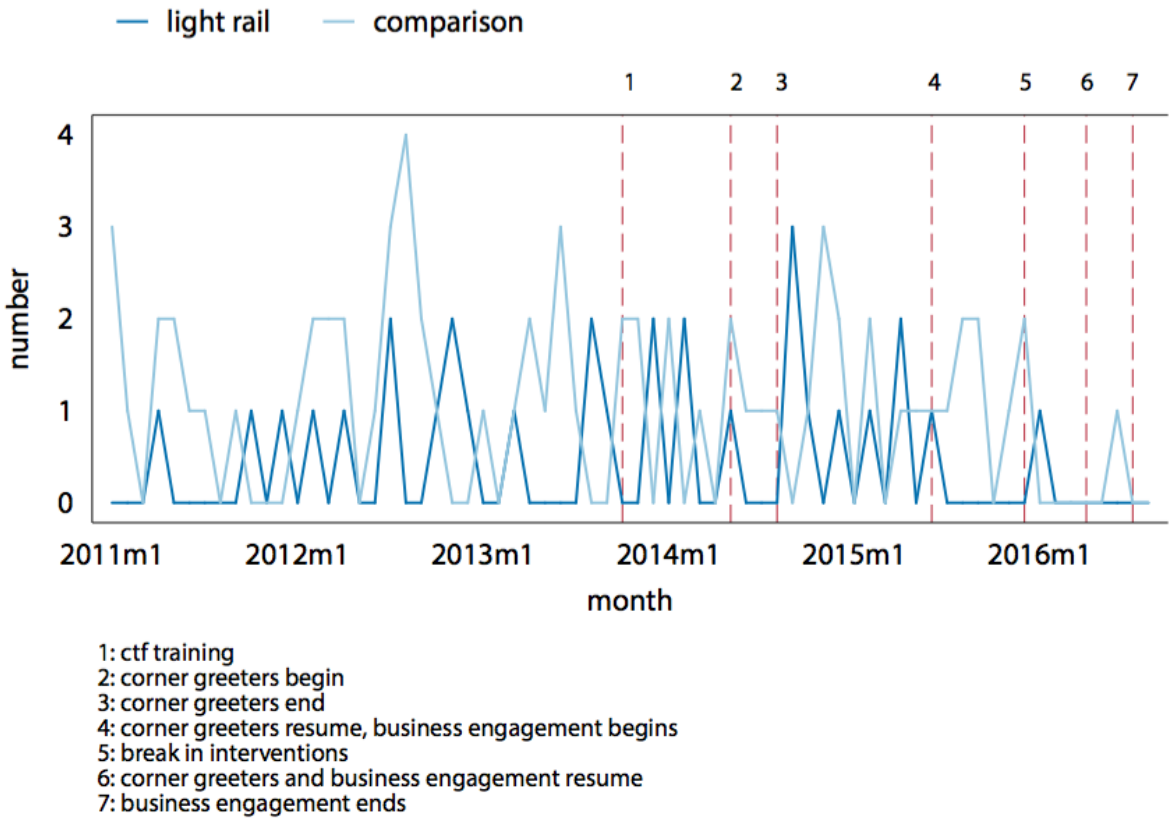


Figure 84: Part II incidents at Lake Washington and comparison site, January 2011–August 2016

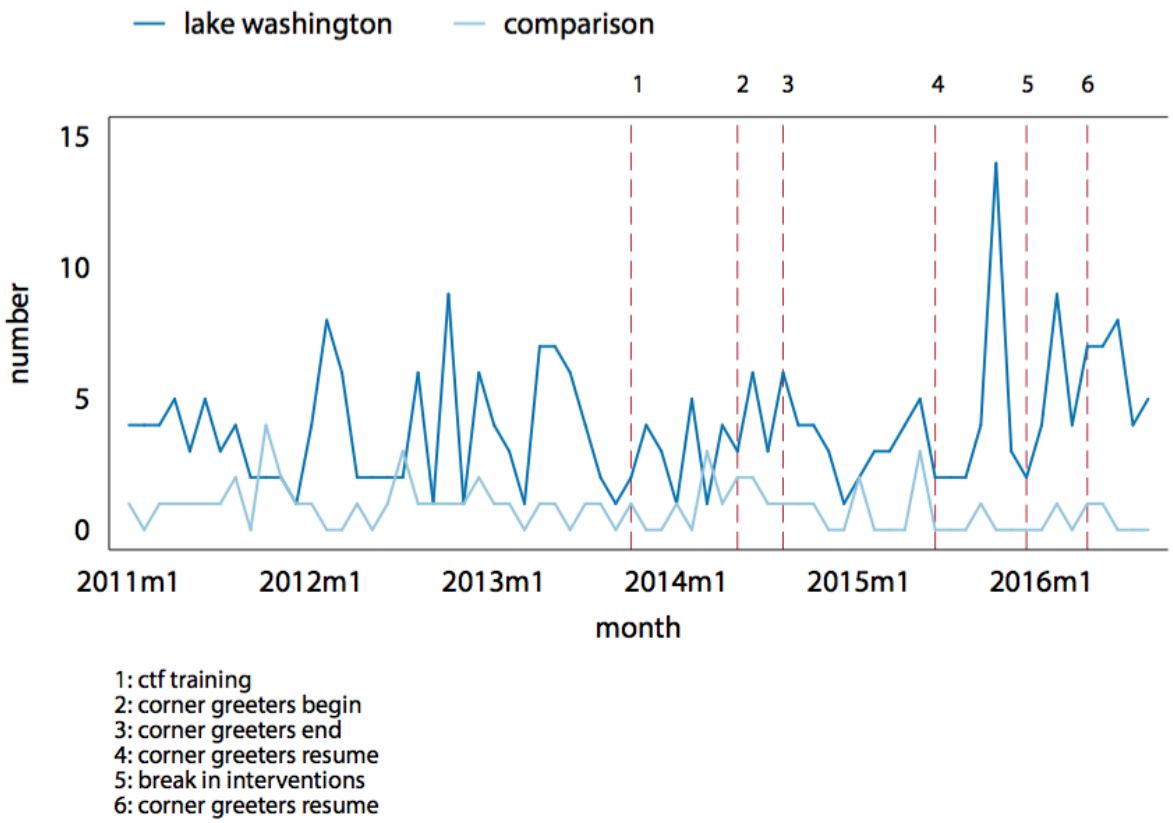


Figure 85: Part II incidents at Safeway and comparison site, January 2011–August 2016

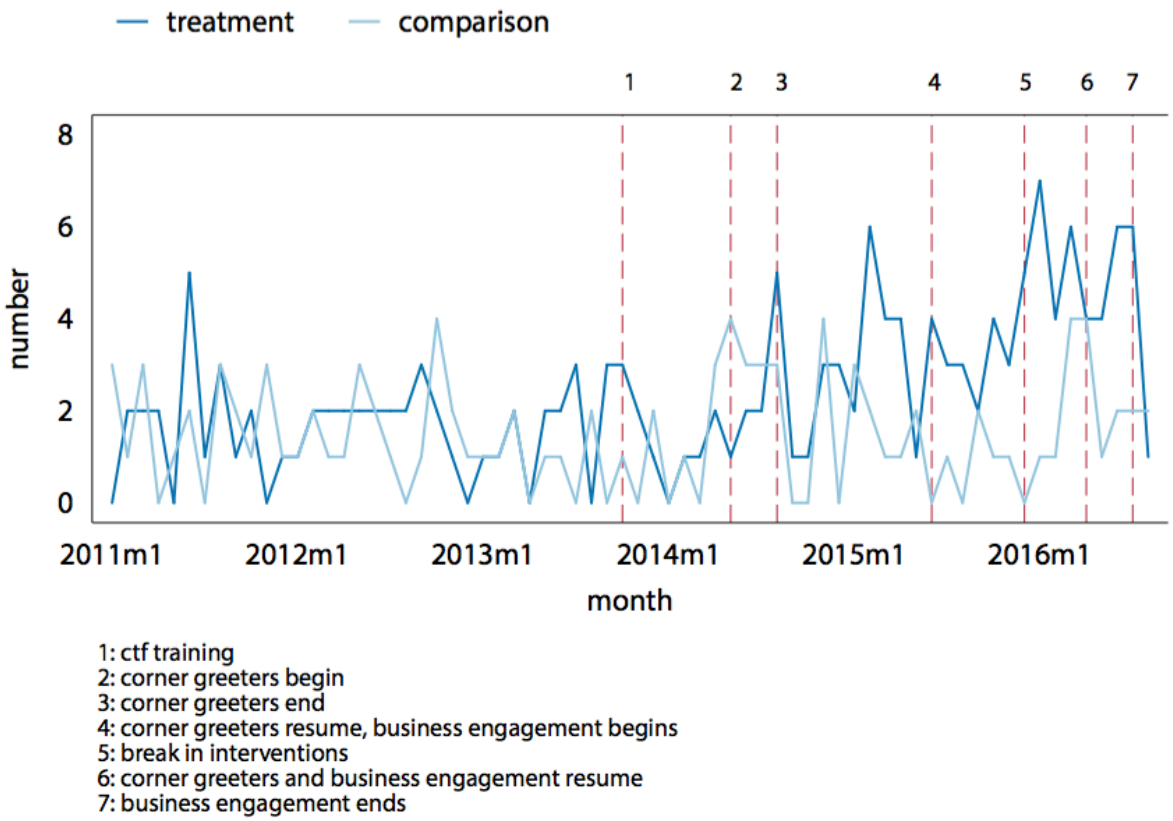


Figure 86: Part II incidents at Corner Greeter and comparison sites, January 2011–August 2016

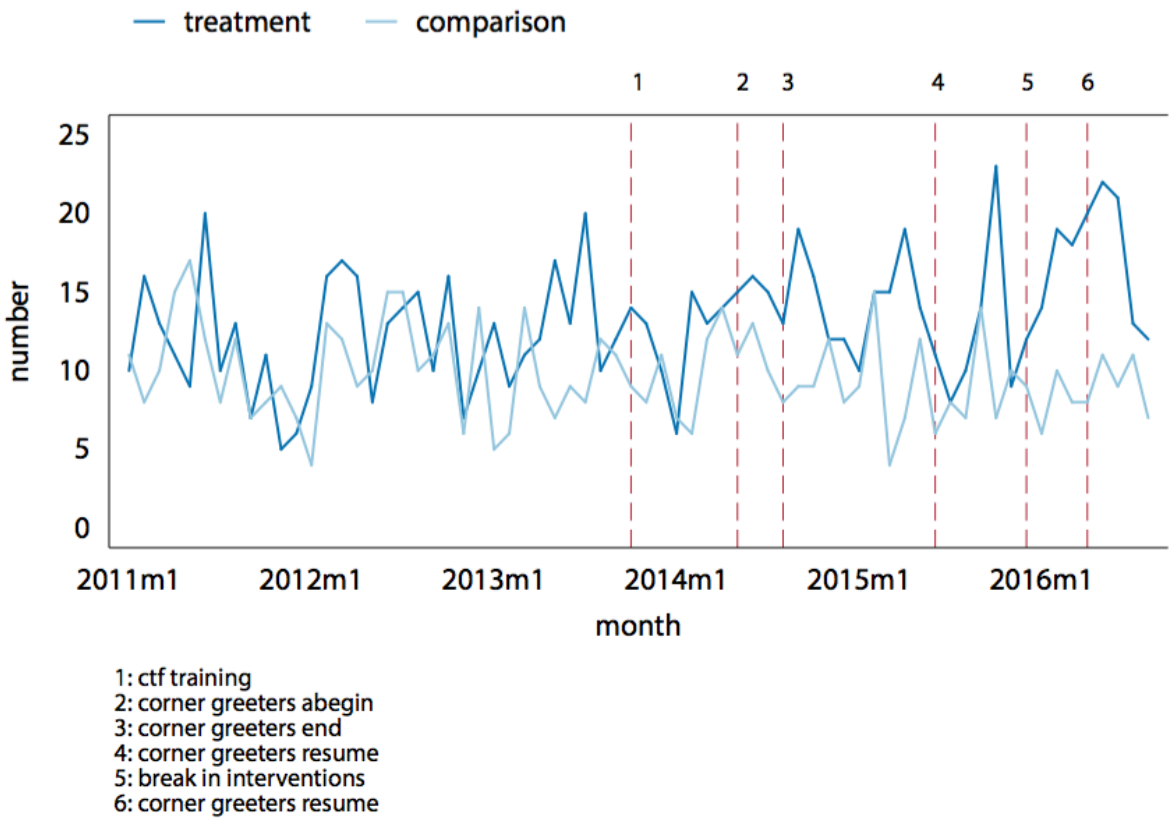


Figure 87: Part II incidents at Plaza Activation and comparison site, January 2011–August 2016

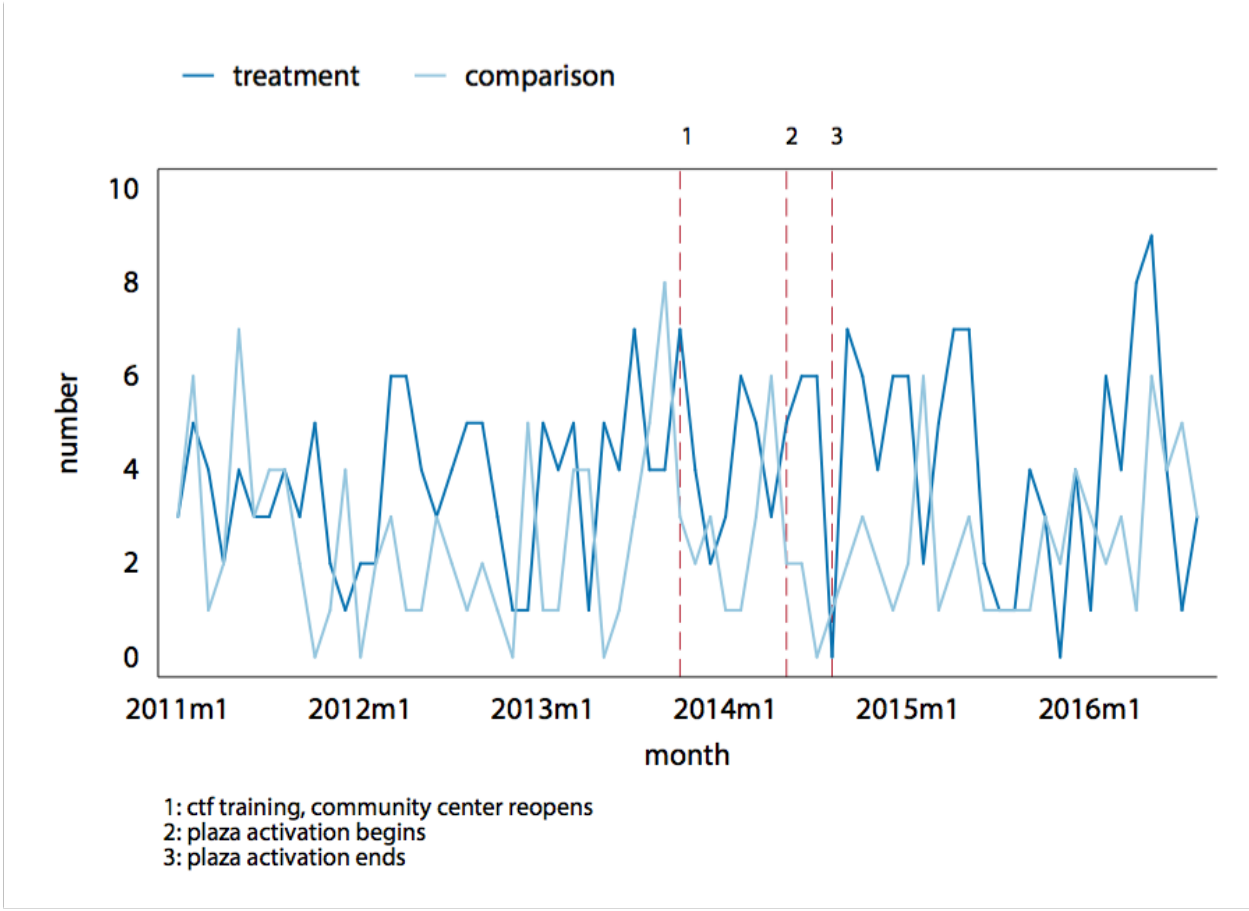


Figure 88: Part II incidents at Safe Passage/Campus Safety and comparison site, January 2011–August 2016

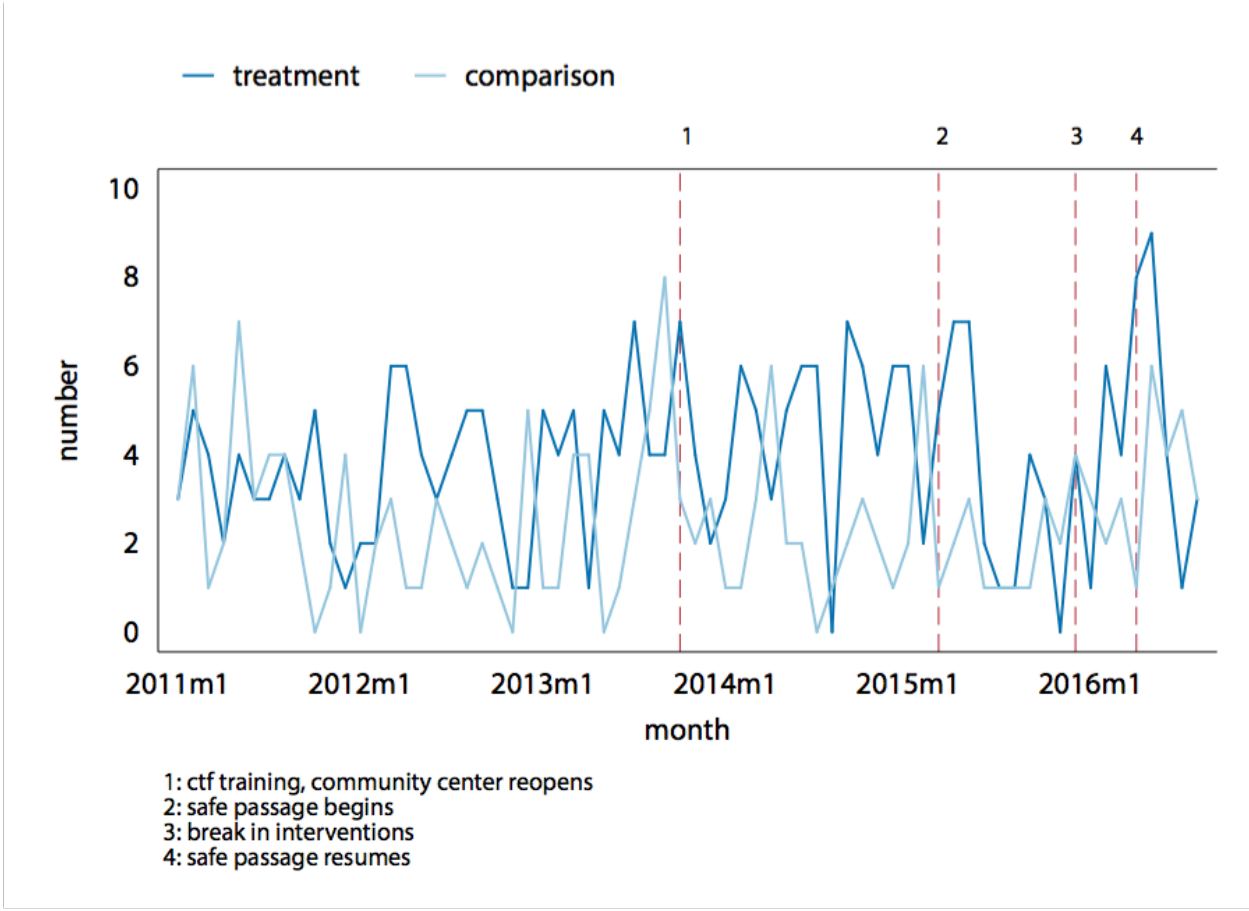


Figure 89: Part II incidents at Business Engagement and comparison sites, January 2011–August 2016

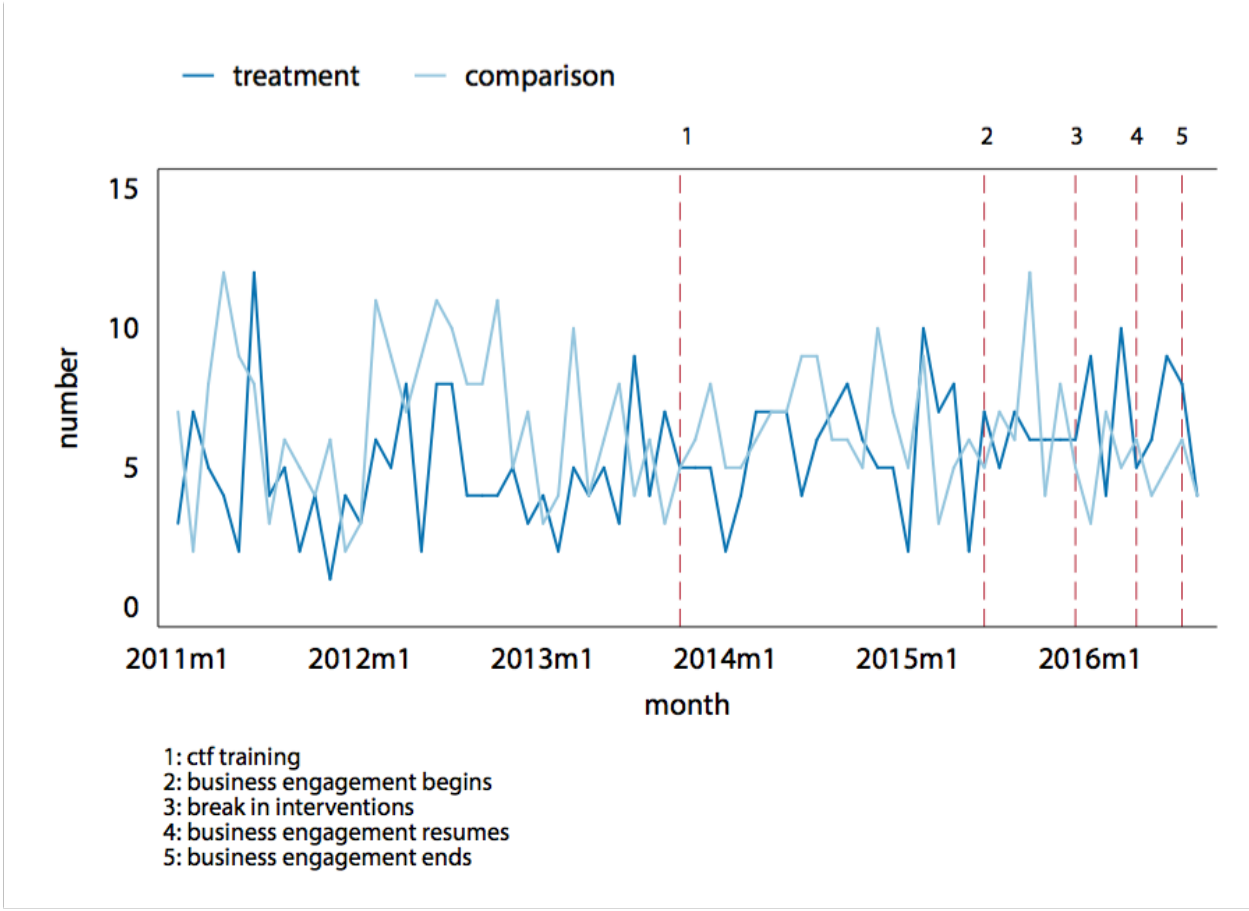


Figure 90: Part II incidents at CPTED and comparison sites, January 2011–August 2016

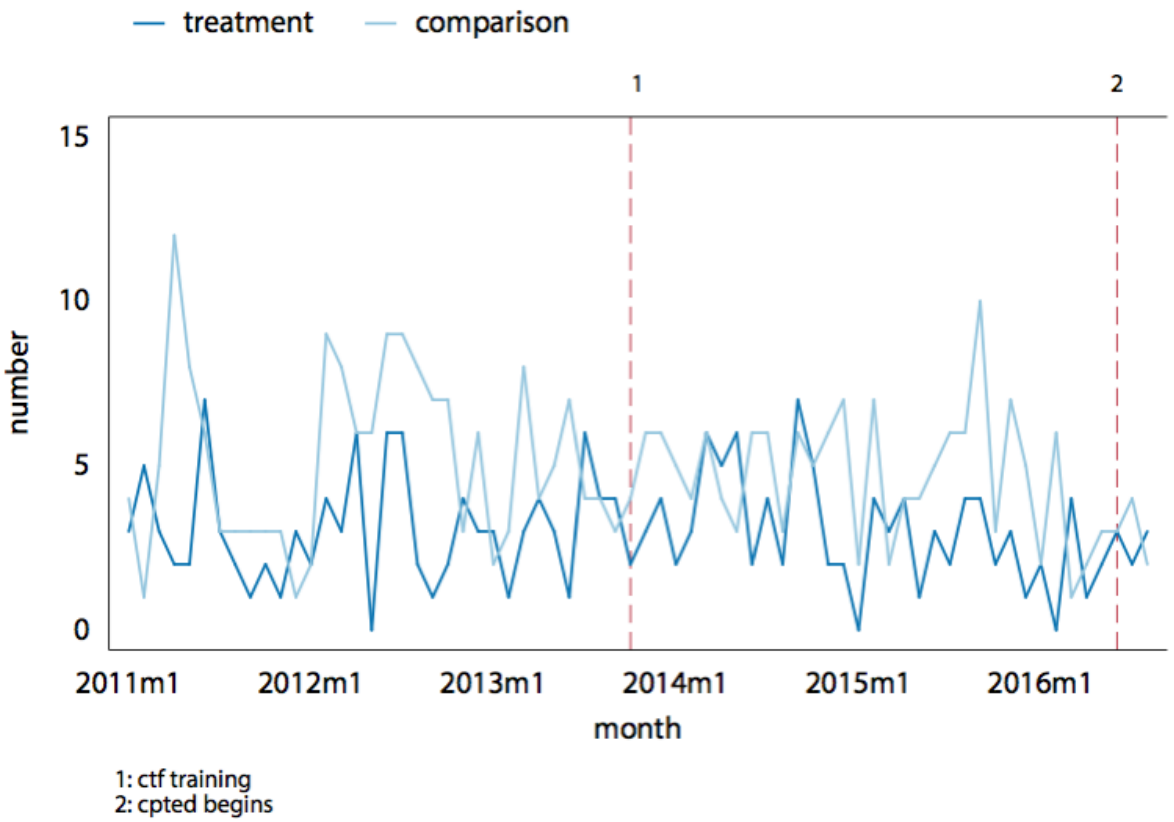


Figure 91: Percent change in calls for service pre- and post-intervention in the hot spots, Rainier Beach neighborhood, and South Precinct

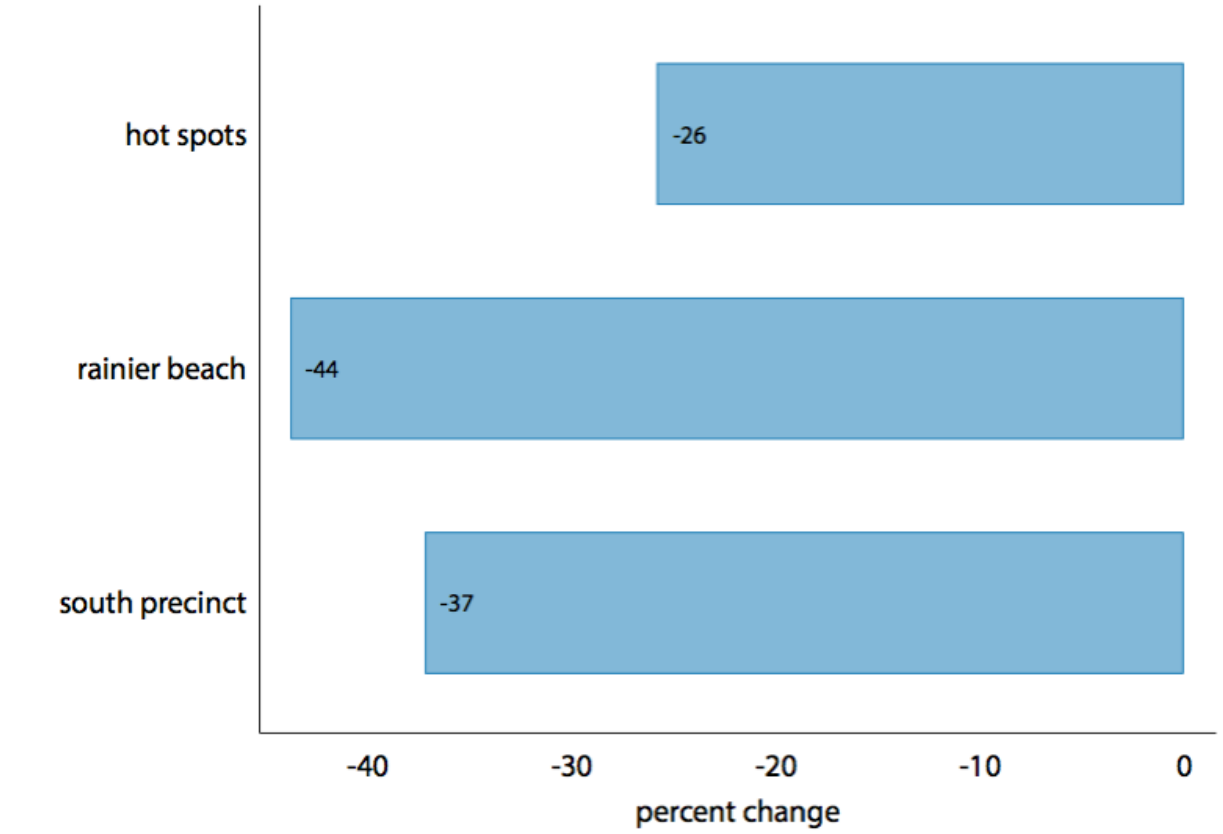


Figure 92: Percent change in incident reports pre- and post-intervention in the hot spots, Rainier Beach neighborhood, and South Precinct

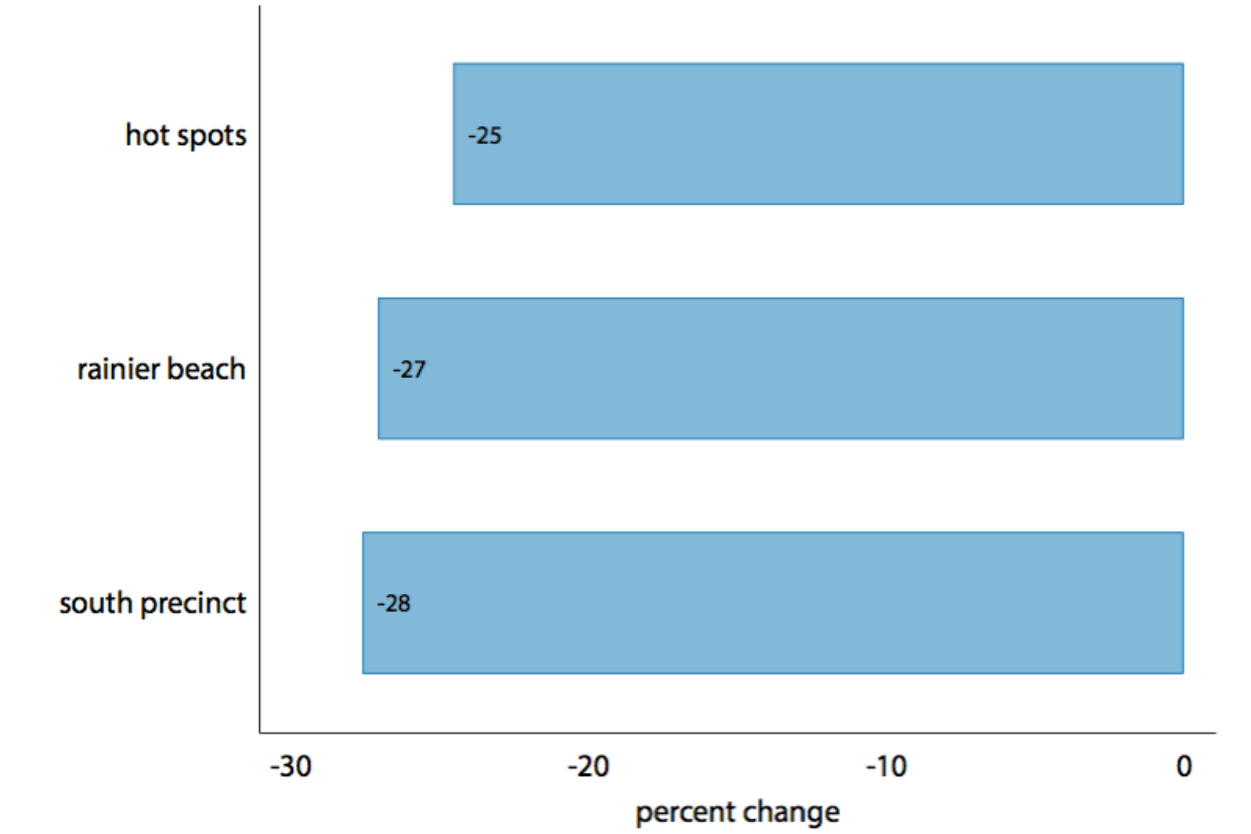


Figure 93: Percent change in youth incident reports pre- and post-intervention in the hot spots, Rainier Beach neighborhood, and South Precinct

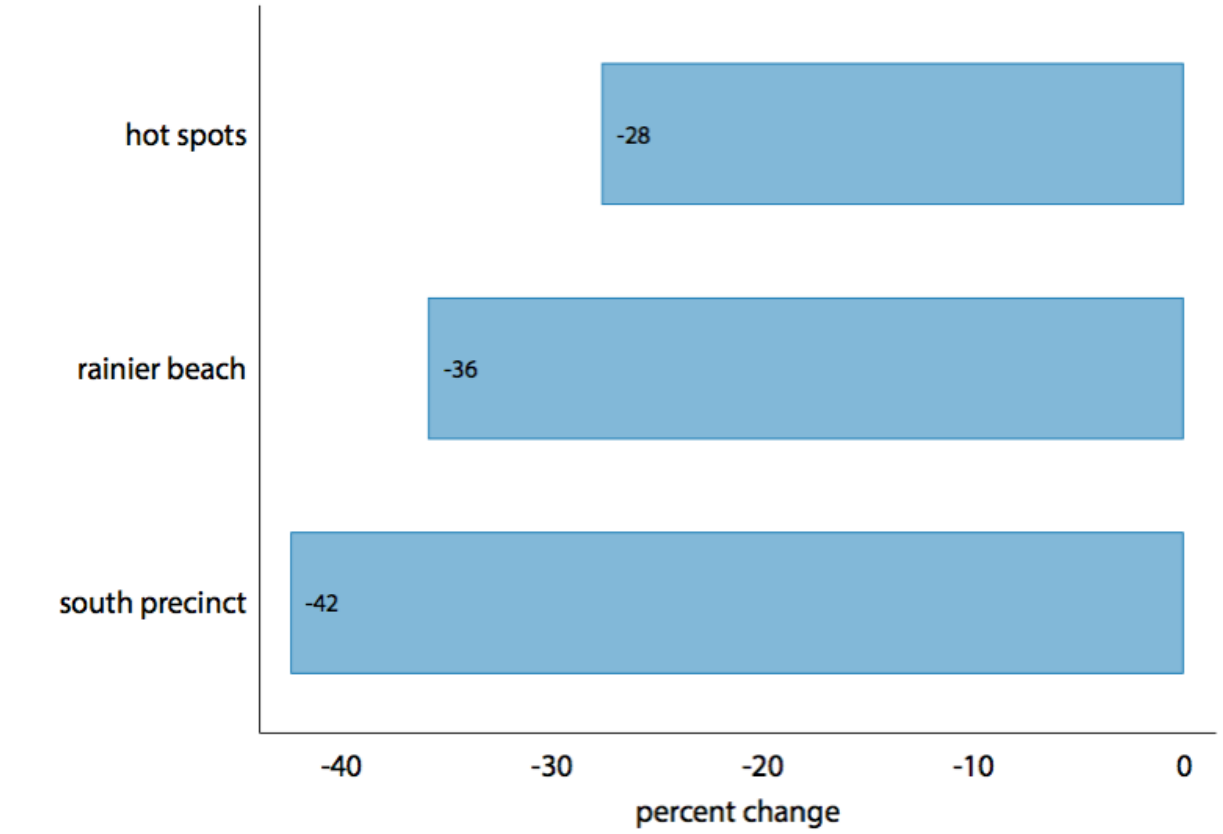


Figure 94: Percent change in Part I violent crimes pre- and post-intervention in the hot spots, Rainier Beach neighborhood, and South Precinct

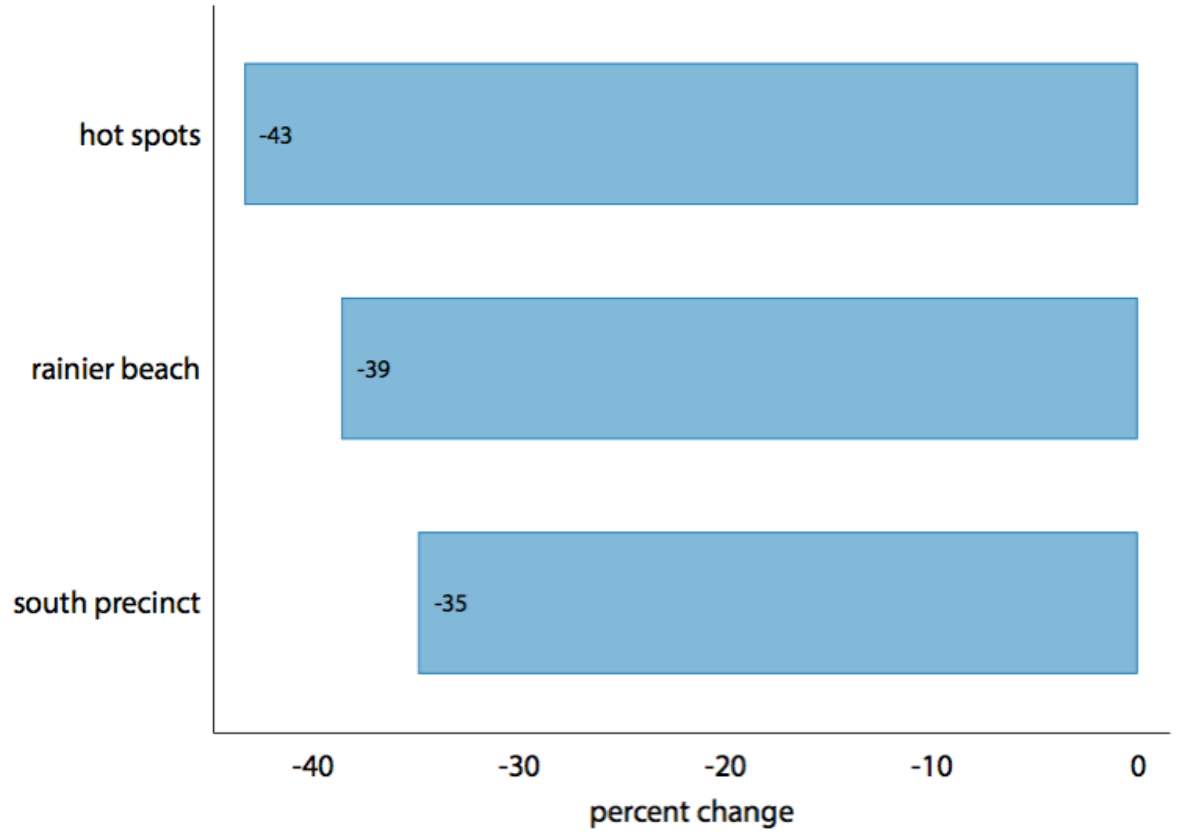


Figure 95: Percent change in Part I property crimes pre- and post-intervention in the hot spots, Rainier Beach neighborhood, and South Precinct

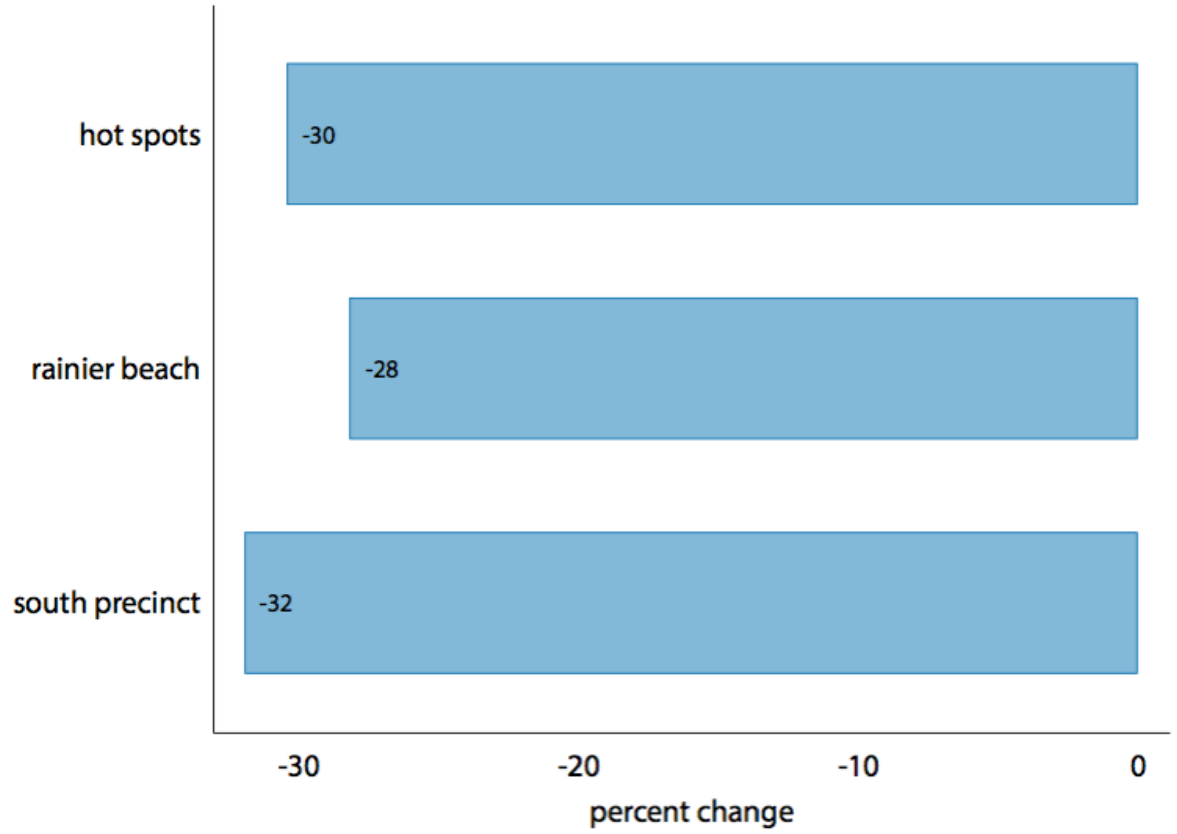


Figure 96: Percent change in violent crimes pre- and post-intervention in the hot spots, Rainier Beach neighborhood, and South Precinct

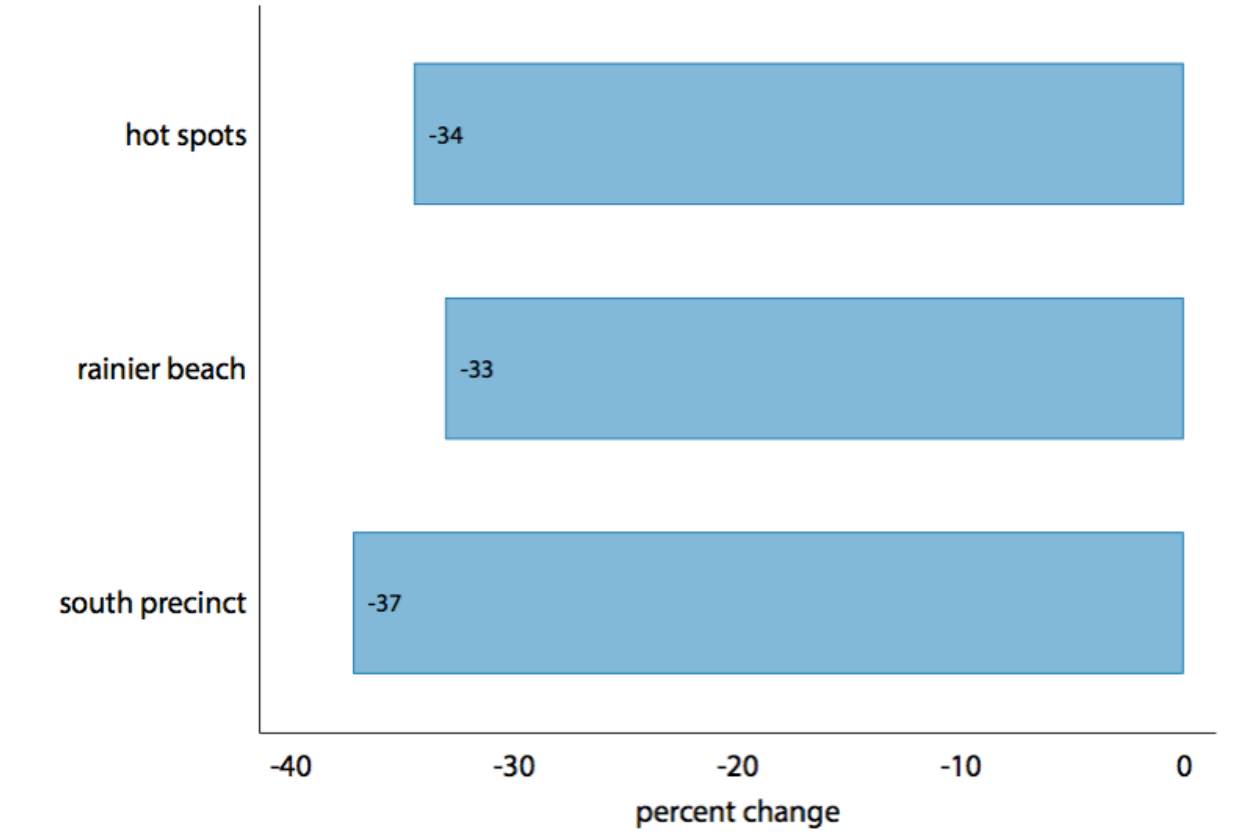


Figure 97: Percent change in Part II crimes pre- and post-intervention in the hot spots, Rainier Beach neighborhood, and South Precinct

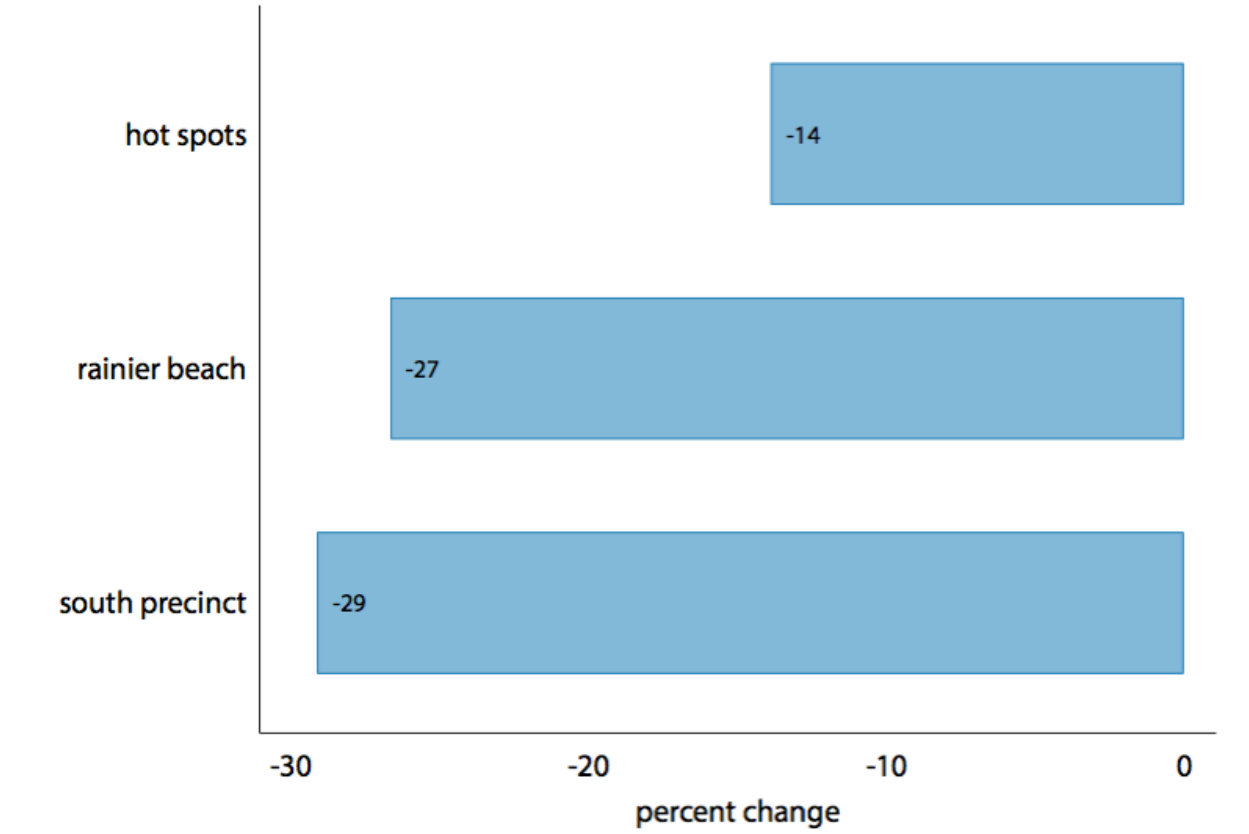


Figure 98: In the past year, has crime gotten better, worse, or stayed the same?

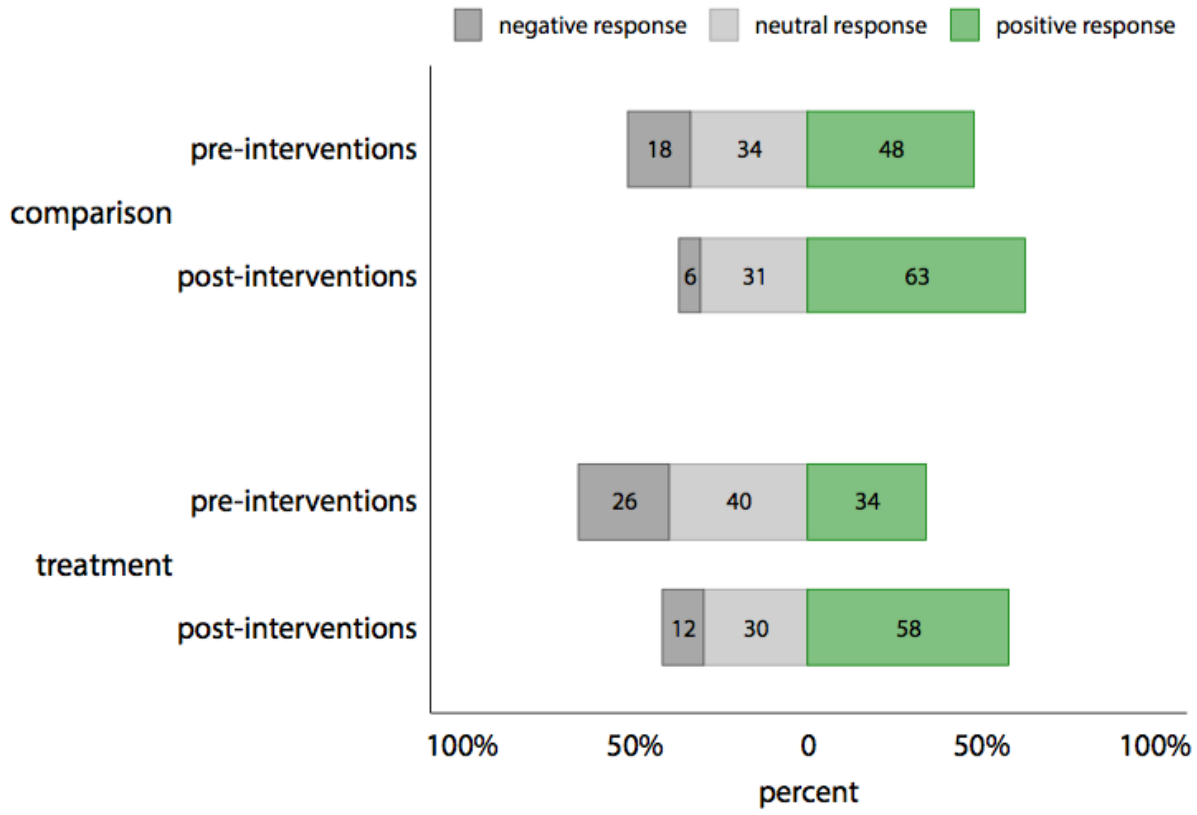


Figure 99: Pre-post change in feelings of safety in the hot spots and comparison sites

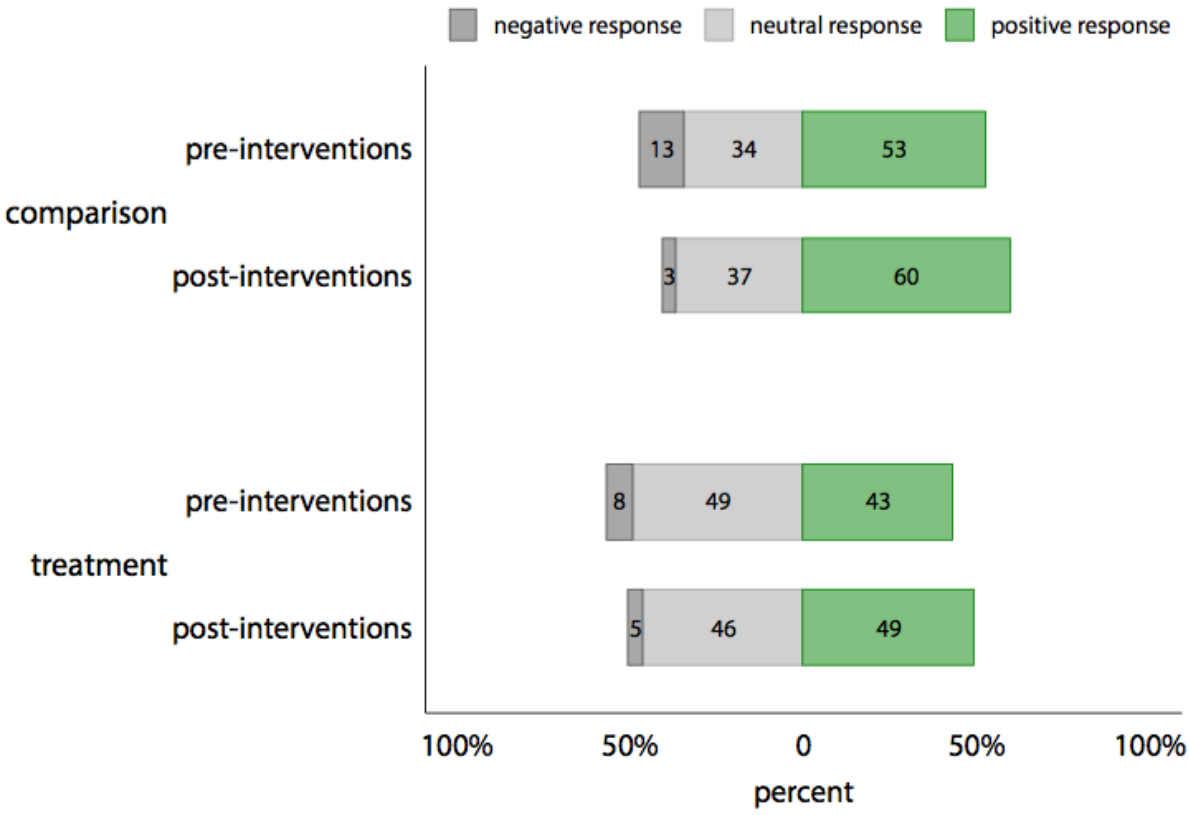


Figure 100: Pre-post change in concerns about crime and disorder in the hot spots and comparison sites

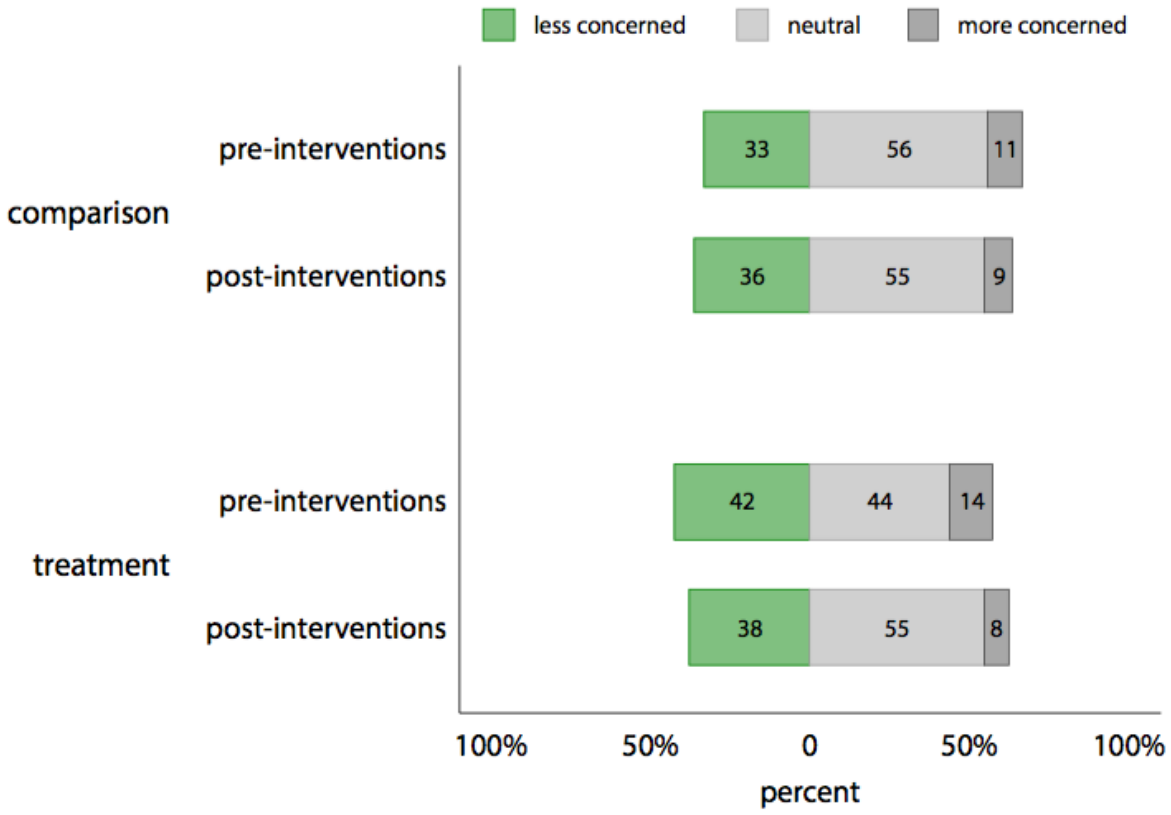


Figure 101: Pre-post change in perceived frequency of disorder in the hot spots and comparison sites

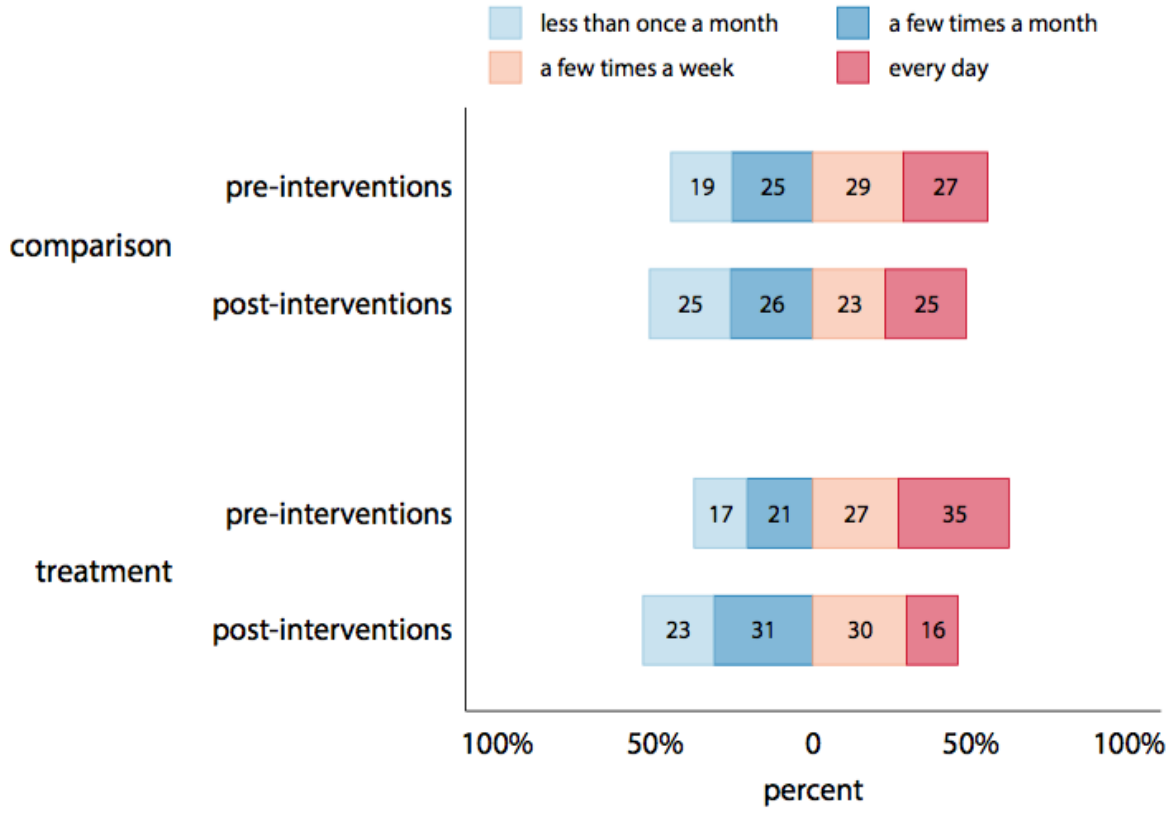


Figure 102: Pre-post change in perceived likelihood of crime in the hot spots and comparison sites

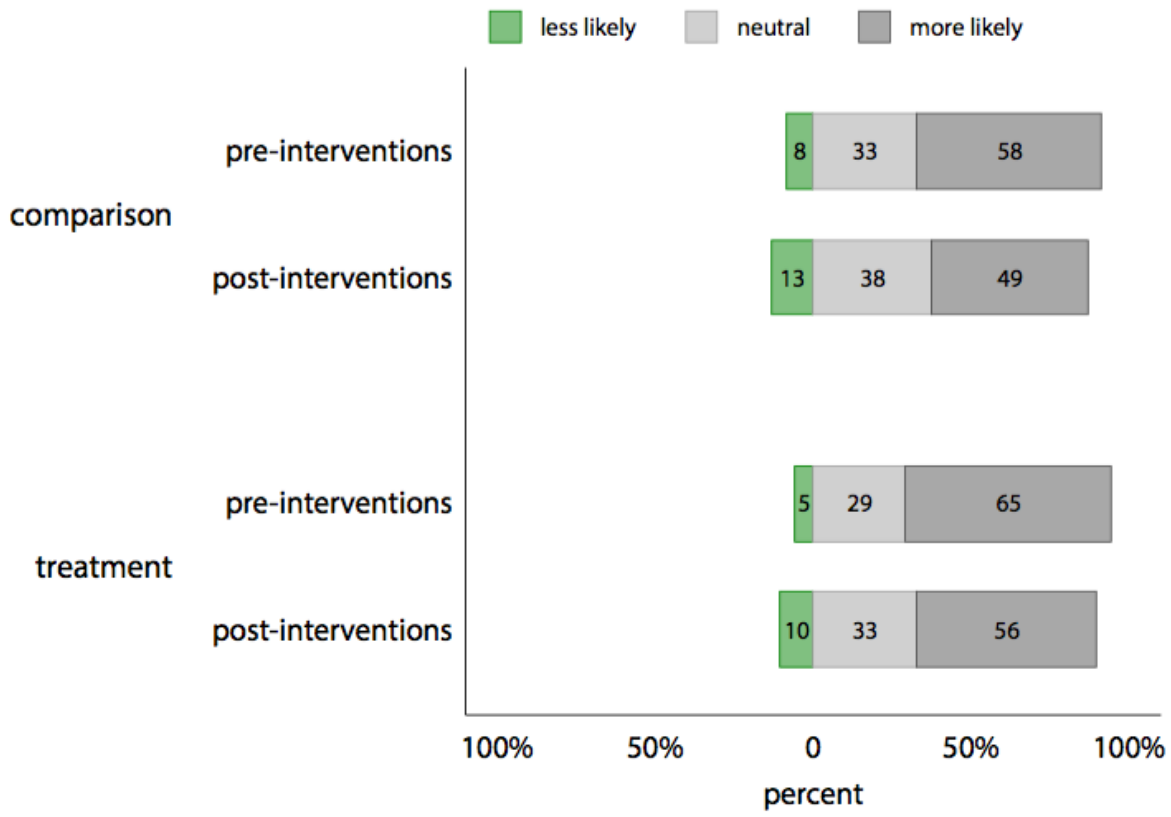


Figure 103: Pre-post change in social cohesion in the hot spots and comparison sites

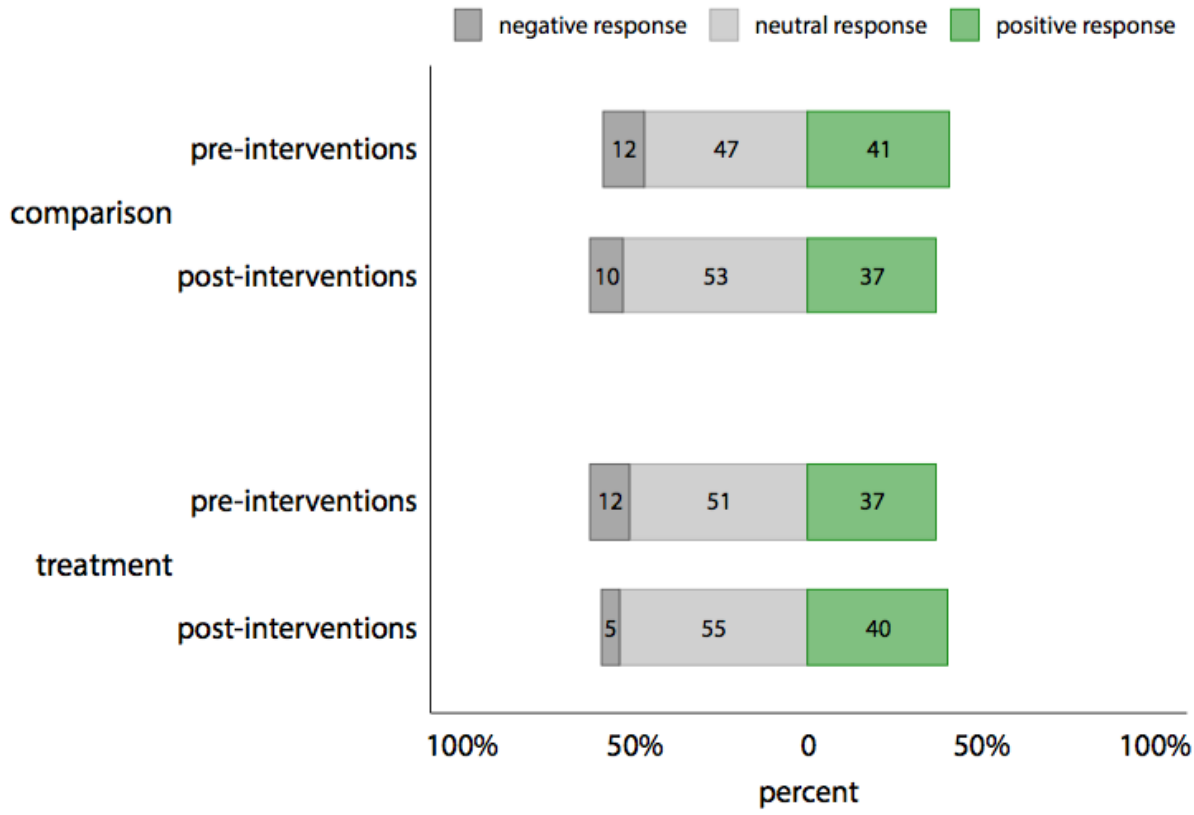


Figure 104: Pre-post change in collective efficacy in the hot spots and comparison sites

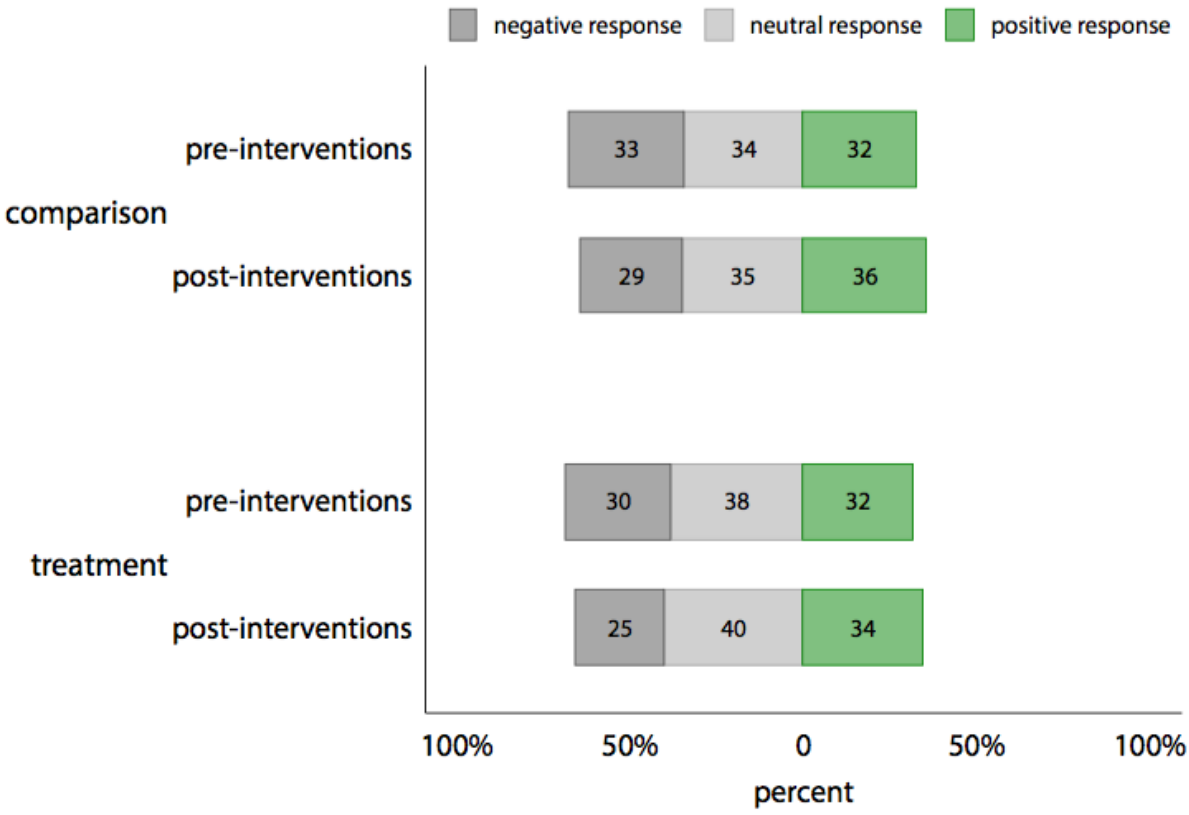


Figure 105: Pre-post change in perceived frequency of police activity in the hot spots and comparison sites

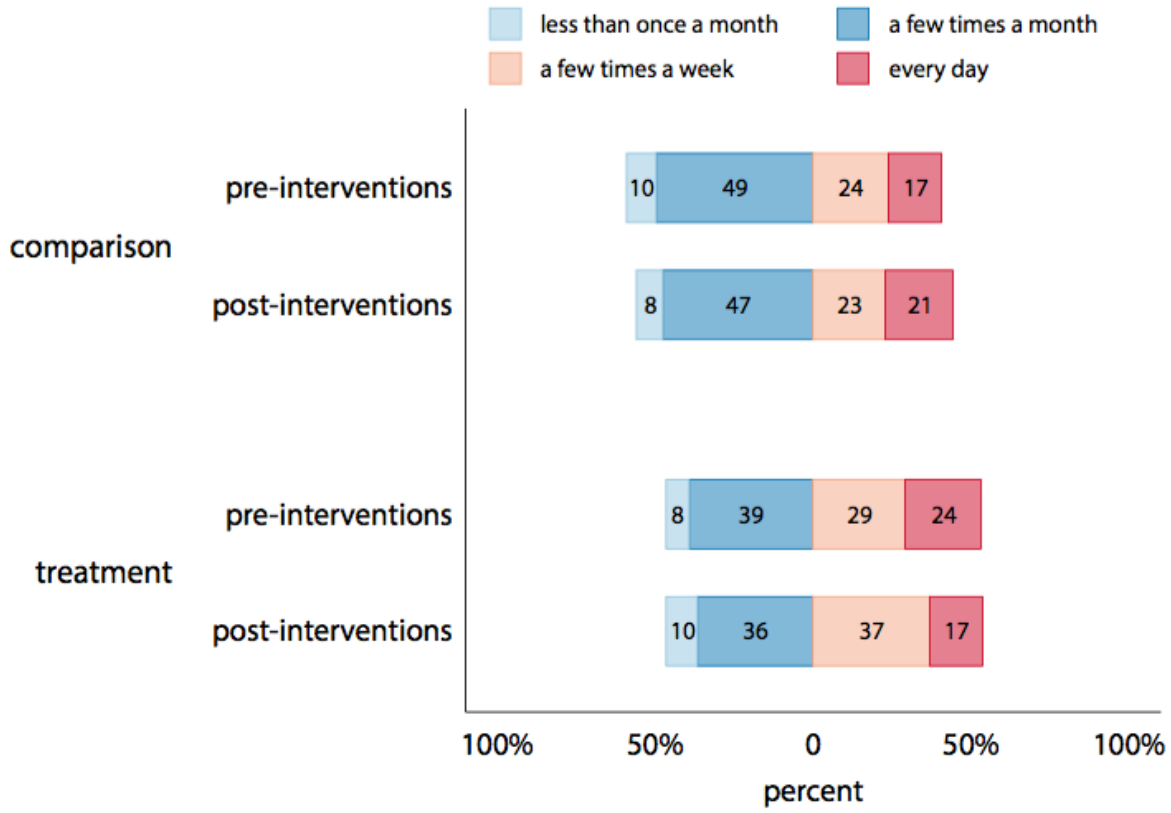


Figure 106: Pre-post change in satisfaction with police in the hot spots and comparison sites

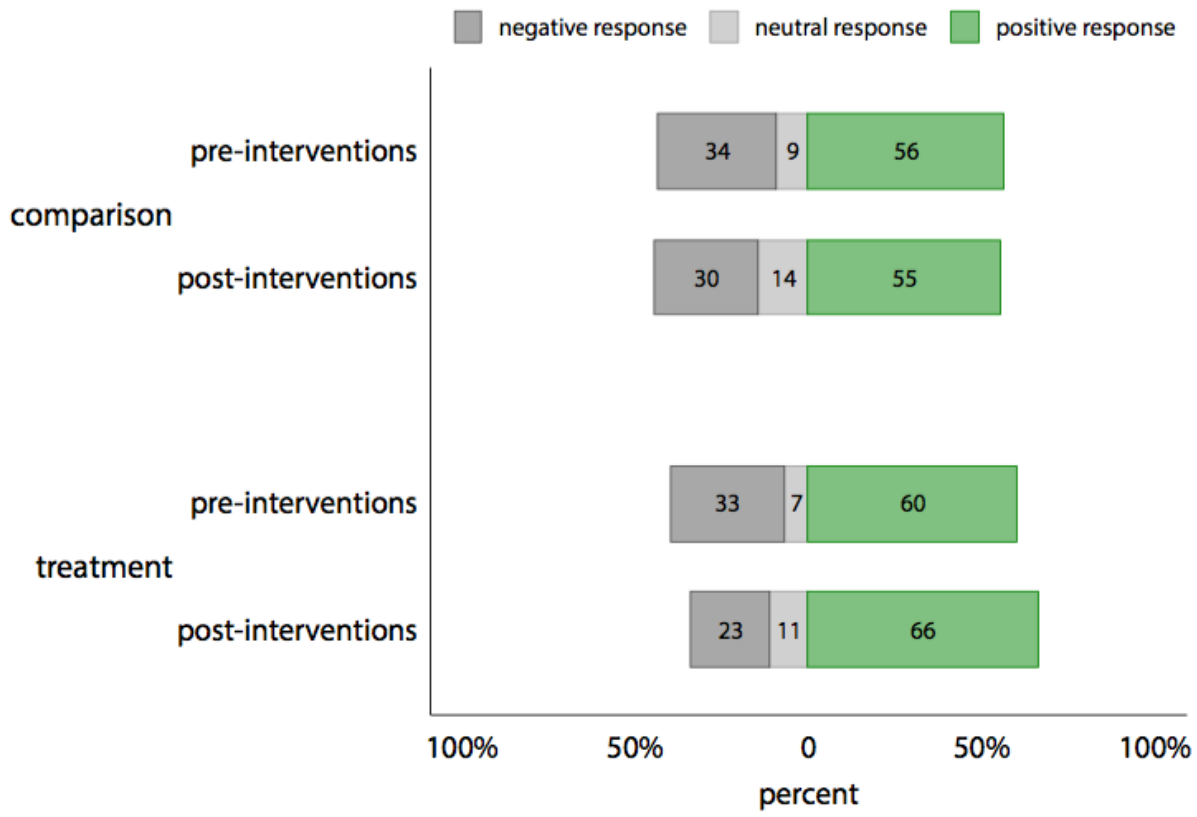


Figure 107: Pre-post change in perceived legitimacy of police in the hot spots and comparison sites