



Smart Policing in Action 1: Findings and Accomplishments from the Smart Policing Initiative (SPI)

Phoenix SPI, Port St. Lucie SPI, BJA, and CNA

March 4, 2015

This project was supported by Grant No. 2013-DP-BX-K006 awarded by the Bureau of Justice Assistance. The Bureau of Justice Assistance is a component of the Office of Justice Programs, which also includes the Bureau of Justice Statistics, the National Institute of Justice, the Office of Juvenile Justice and Delinquency Prevention, the Office for Victims of Crime, and the SMART Office. Points of view or opinions in this document are those of the author and do not necessarily represent the official position or policies of the U.S. Department of Justice.



Evaluating the Impact of Officer Worn Body Cameras in the Phoenix Police Department

Charles Katz, Mike Kurtenbach, David Choate, Justin Ready

March 4, 2015

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City Manager Task Force

- Created in April 2010 to address residents' concerns about Phoenix Police Department interactions with the community
- Developed 34 recommendations designed to increase community access to, communication with, and confidence in the Phoenix Police Department
- One recommendation called for a pilot program involving the deployment of dashboard cameras

Targeted Problems

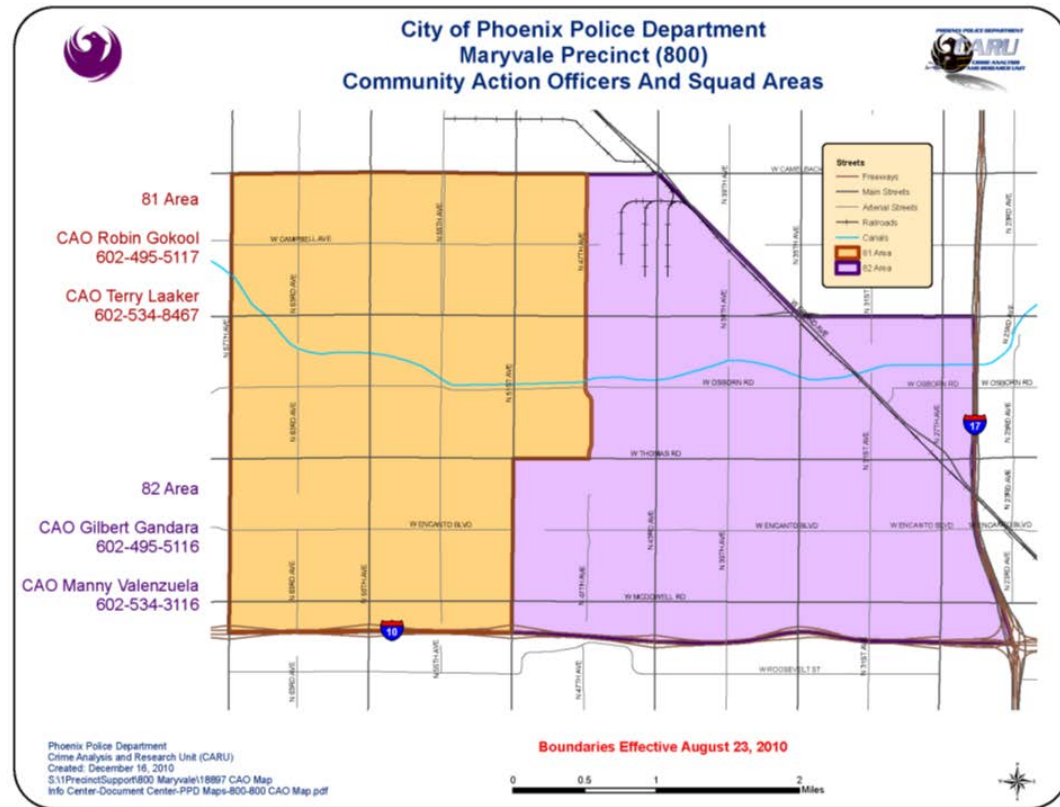
- Violence in general has declined in Phoenix, but domestic violence has remained problematic
 - Approximately 40,000 incidents of domestic violence are dispatched per year
 - Domestic violence is one of the top five call types
- Shift in relationship with residents
 - Police community relations are complex in some communities
 - High-profile events involving police-resident encounters have and continue to occur in these same communities

The Technology

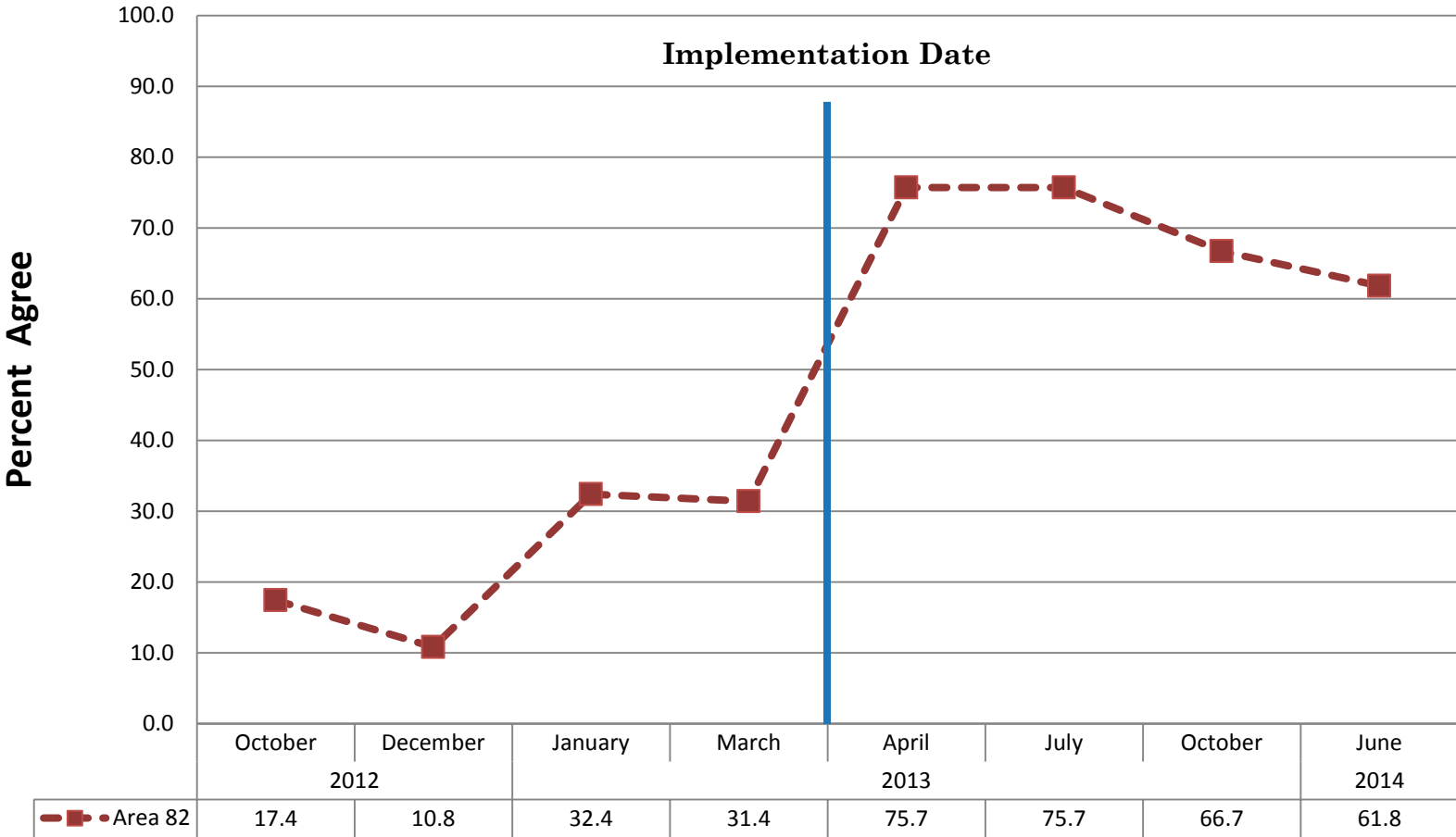
- Selected View
 - Self-contained device worn on the torso
 - Size of a pager
 - Docking station
 - Uploaded to Phoenix Police Department servers

Quasi-Experimental Design

- Repeated measures from the sources below
 - Police/court data
 - Administrative records
 - Officer self-report surveys
 - Meta-data from cameras
 - Interviews with officers

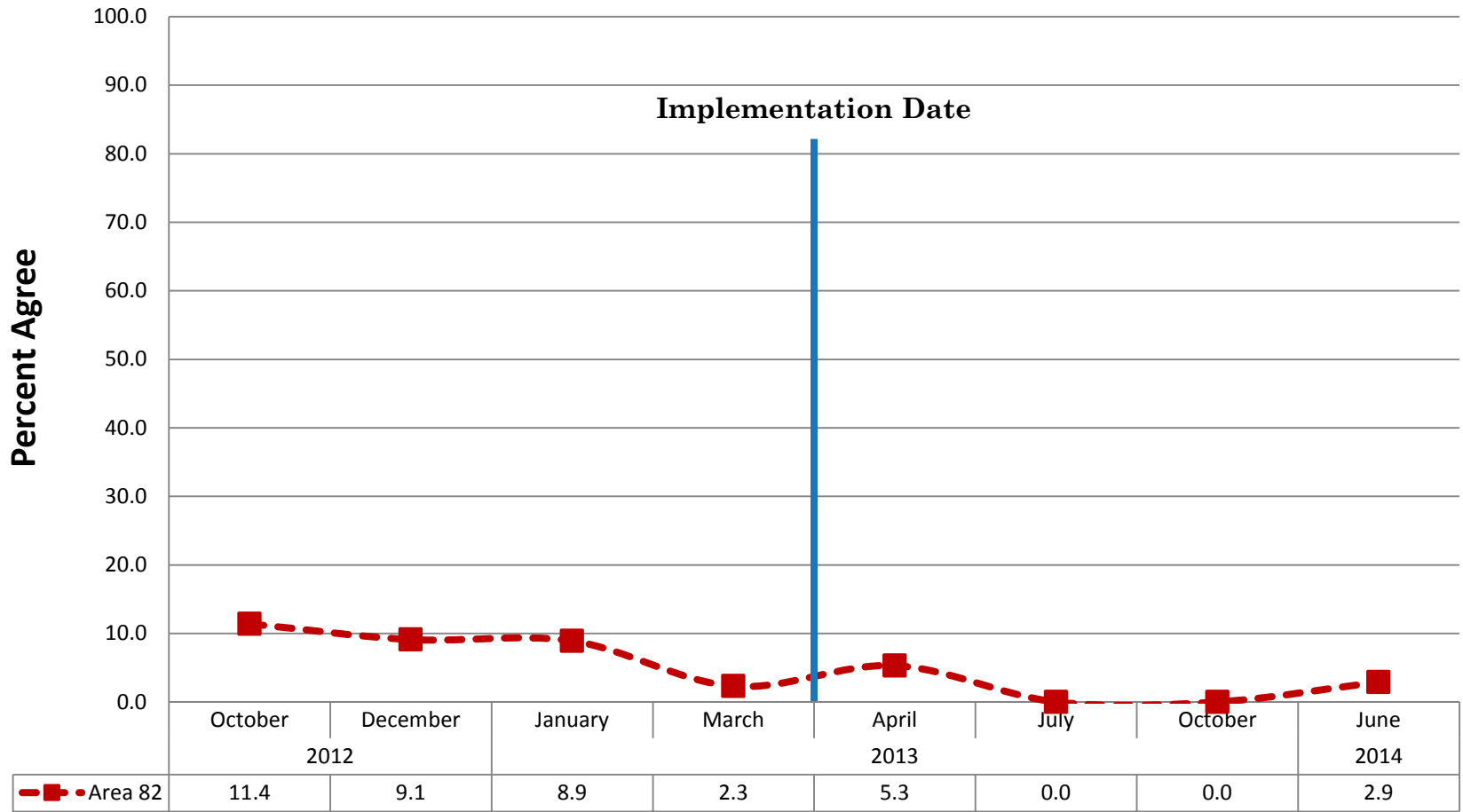


Equipment Is Easy to Use



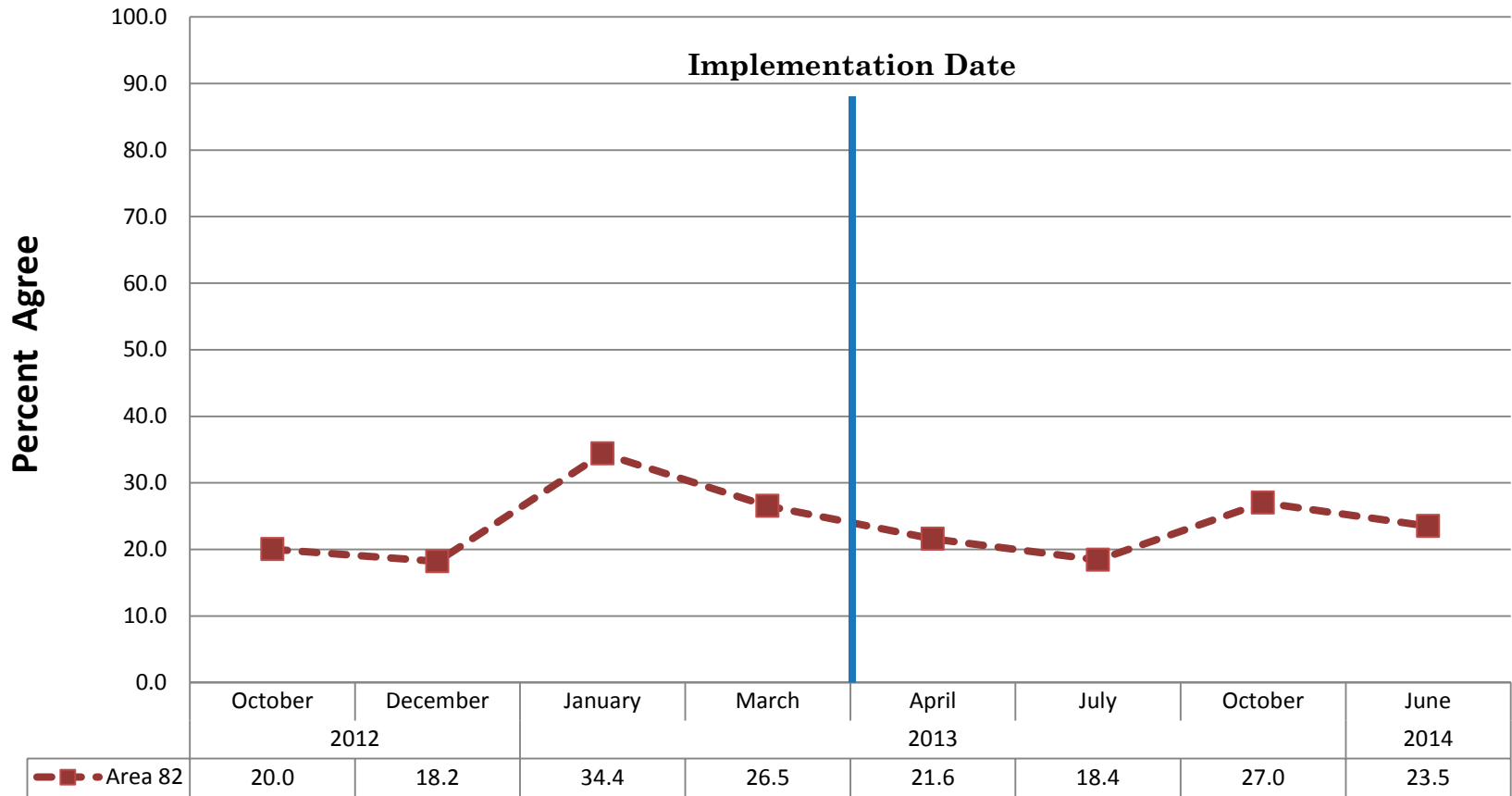
Key takeaway: After implementation, officers found the cameras easier to use than they expected.

Incident Reports: Less Time Spent On Paperwork



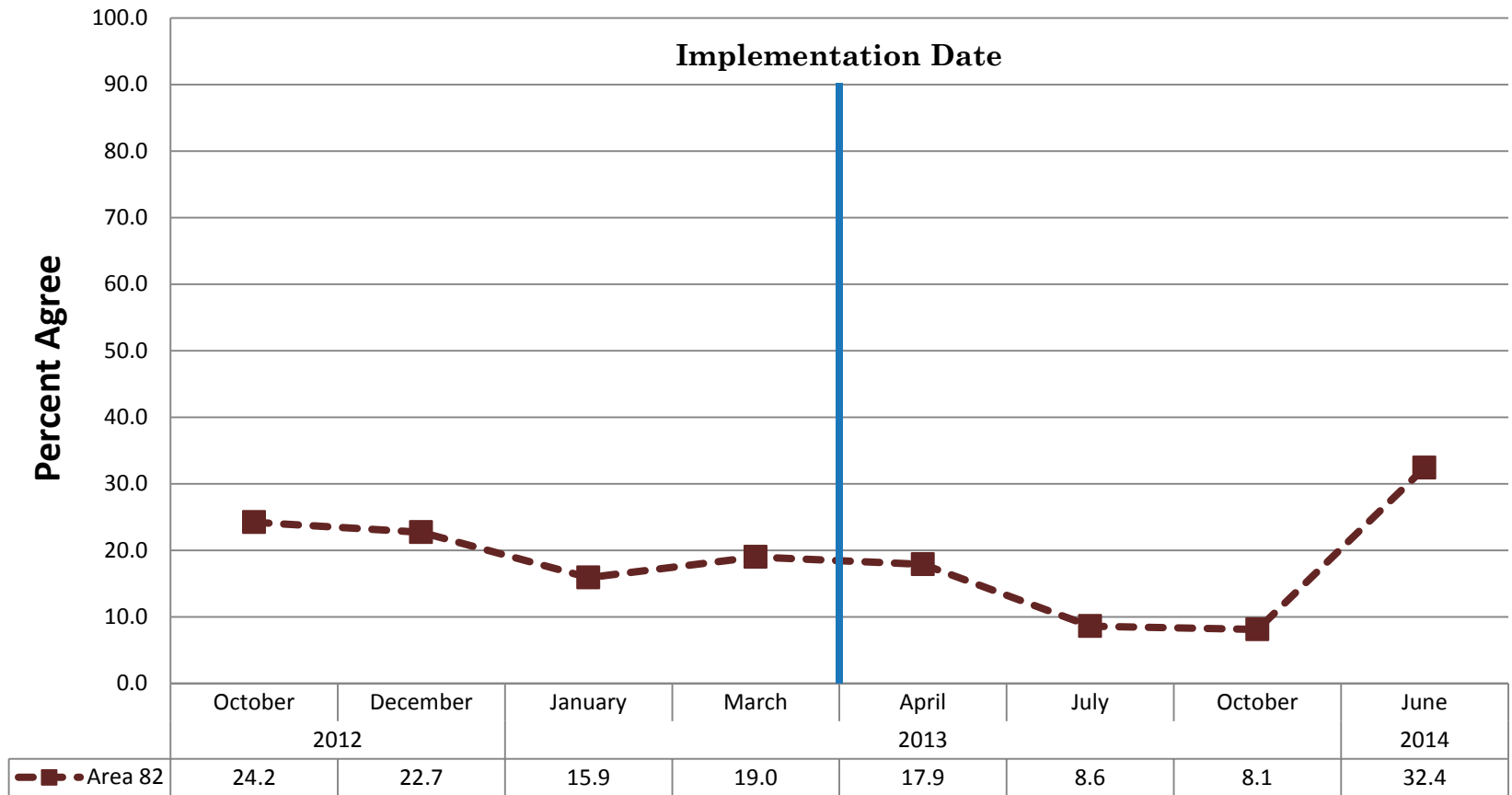
Key takeaway: Camera implementation did not decrease the time officers spent on paperwork.

Easy to Download Data



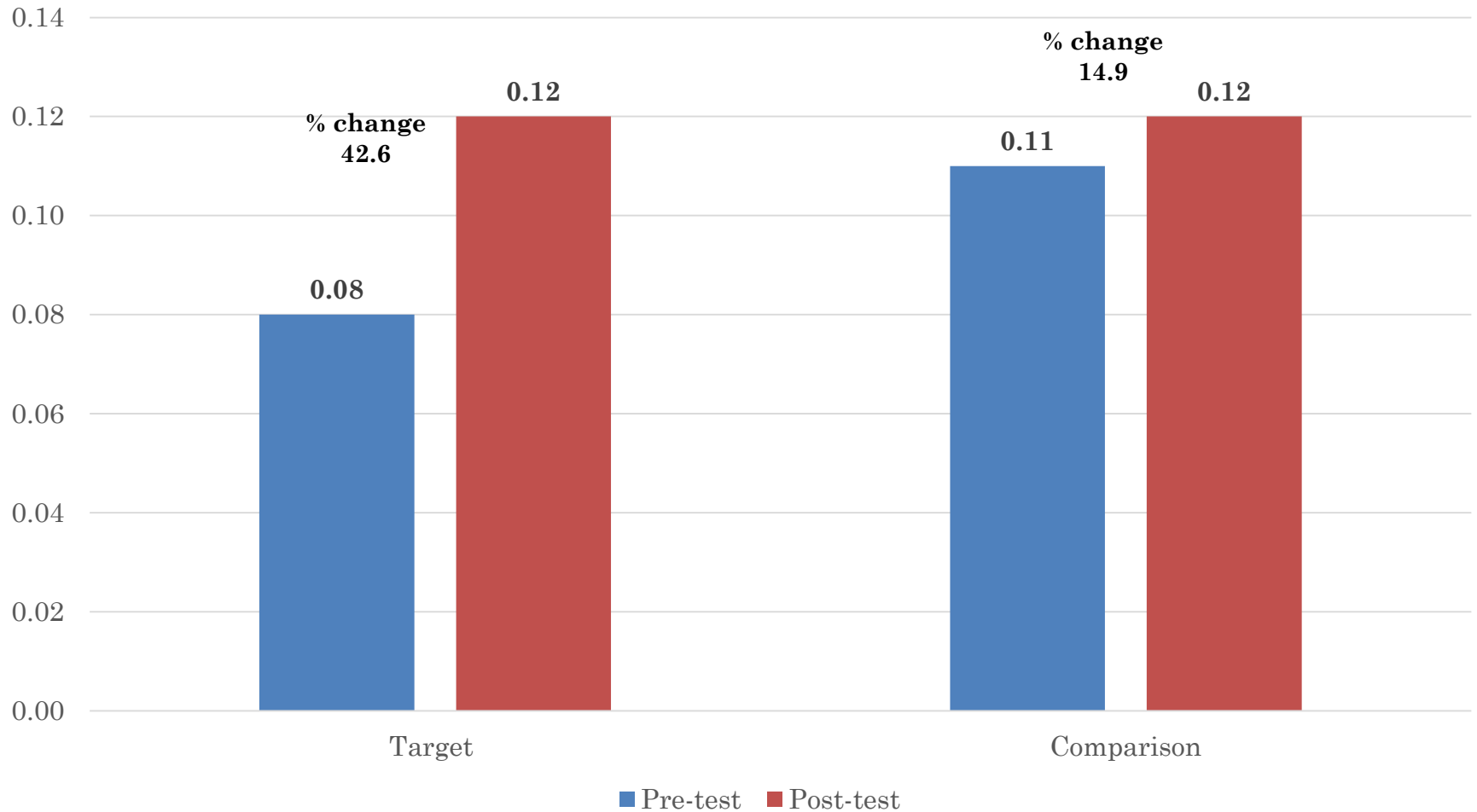
Key takeaway: After implementation, officers were slightly less likely to agree that downloading data was easy.

Cameras Should Be Expanded to Other Departments

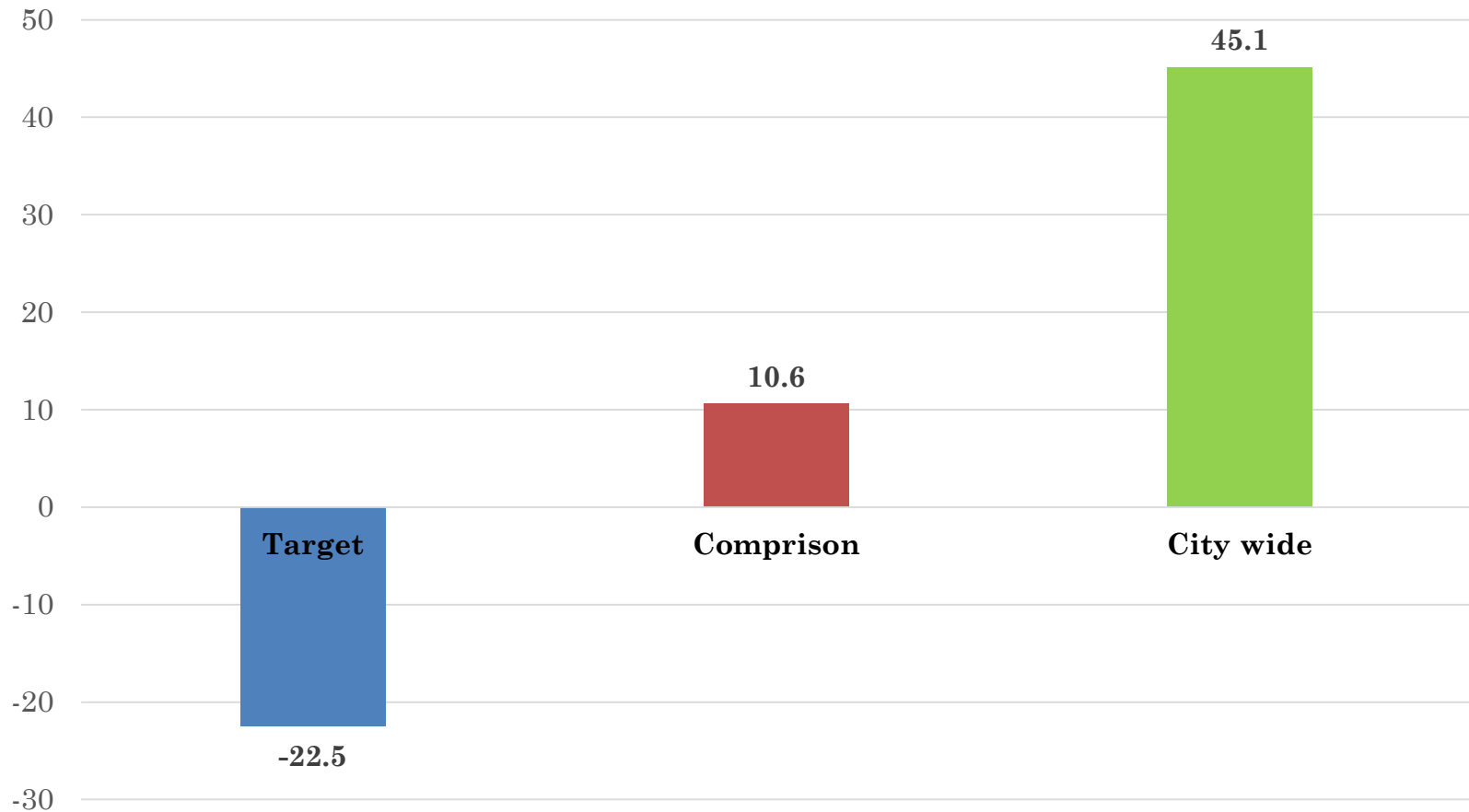


Key takeaway: Officers were more likely to agree camera use should be expanded into other departments after several months of implementation.

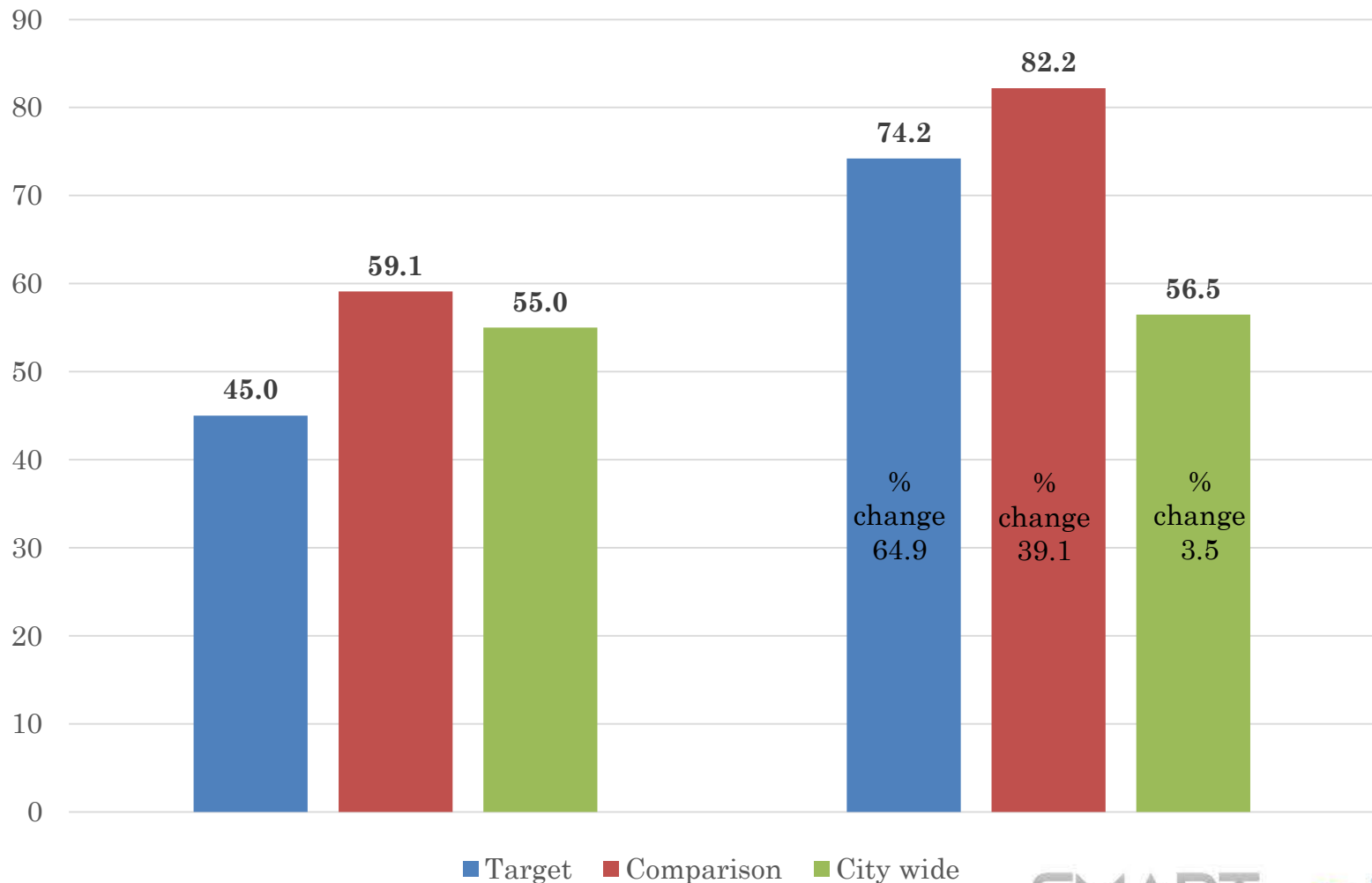
Productivity: Mean Numbers of Arrests



Percentage Change in Complaints Before and After Body Worn Cameras



Percentage of Complaints That Are Unfounded



Use of Body Camera Evidence in Court for Domestic Violence Offenses

- Investigator use
- Evidence storage (information technology)
- Prosecutor tracking and review
- Court liaison officer

Domestic Violence (DV) Case Flow Pre & Post Camera Deployment

	Pre-Test Case		Post-Test Comparison		Post-Test Camera	
	n	%	n	%	n	%
Number of DV-Related Contacts ^a	878	100.0	933	100.0	252	100.0
Cases Initiated	369	42.0	320	34.3	103	40.9
Charges Filed	333	37.9	243	26.0	90	37.7
Case Furthered (Not Dismissed)	131	14.9	58	6.2	32	12.7
Plead Guilty	27	3.1	11	1.2	11	4.4
Guilty at Trial	25	2.8	9	0.9	11	4.4

^a The number of contacts is derived from the DV pocket cards, which included data on 2,063 unique incidents from January 1, 2012, through July 31, 2014, from the Maryvale Precinct.

Case Processing Time

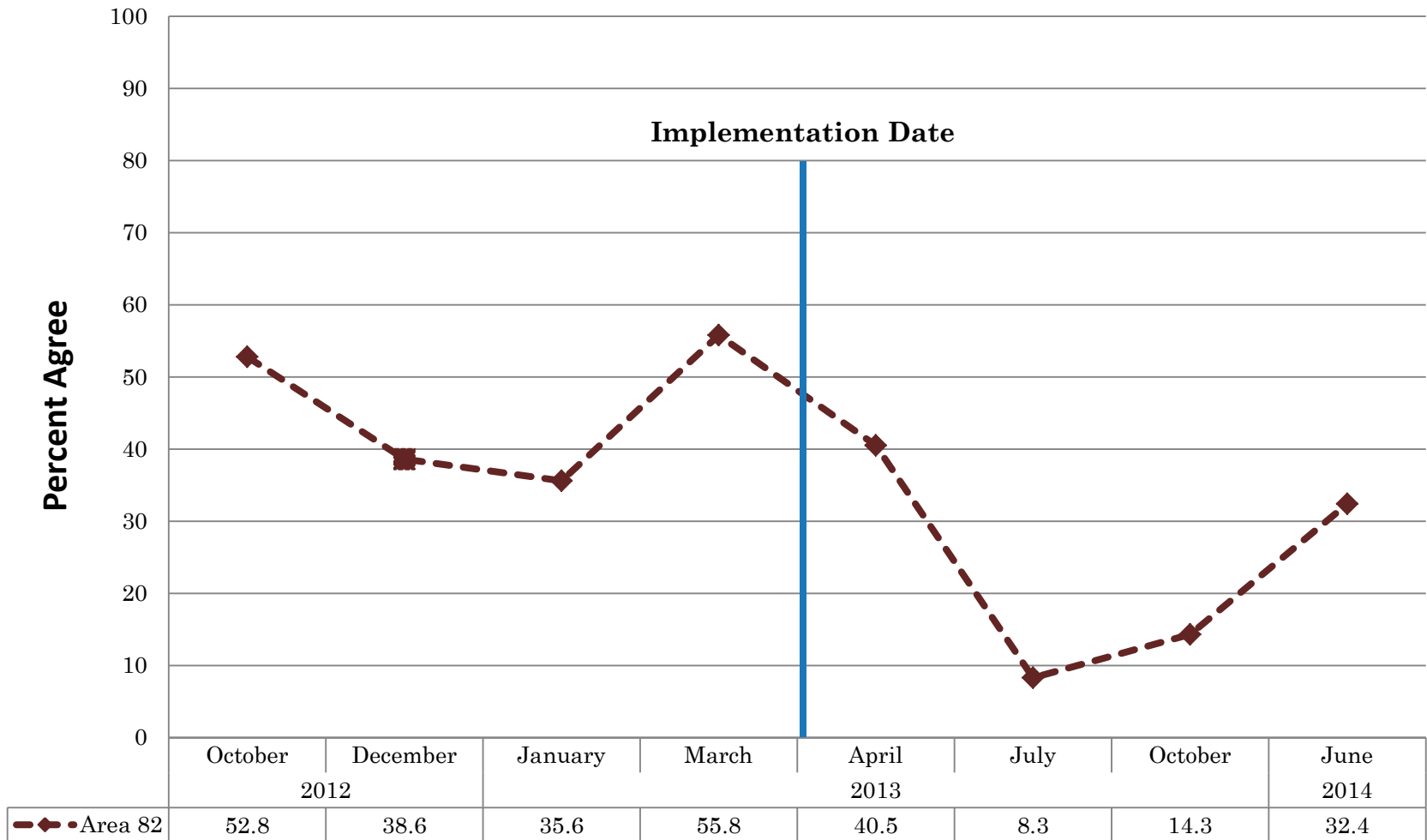
Number of Days to Process Case to Disposition (N=795) †

	Pre-Test Case			Post-Test Comparison			Post-Test Camera		
	mean	SD	n	mean	SD	n	mean	SD	n
All Completed Cases *	95.8	124.30	340	43.5	77.50	266	78.1	105.10	92
Dismissed *	65.3	91.00	201	38.2	67.80	184	56.1	65.90	58
Plead Guilty *	167.7	157.57	104	71.3	100.44	46	131.9	156.40	21
Trial	74.4	90.61	27	114.2	125.06	11	105.5	126.07	11

* Significant at $p \leq 0.05$

† Original values ranged from 0 to 756. Values above the 98th percentile of 438 days (n=16) were truncated to 438 to control for outlier cases.

Easier To Prosecute DV Offenders



Conclusions

Strengths

- Decrease in complaints
- Increase in unfounded incidents
- Increase in arrests (+/-)
- Prosecution of domestic violence

Challenges

- Officer resistance
- Information technology costs
- Increase time spent on officer paper work
- Prosecutor capacity
- Redaction

Experimental Test of Offender-Based Police Response in Long-Term Property Crime Hot Spots

Port St. Lucie, FL Police Department
Funded by Bureau of Justice Assistance, Smart Policing Initiative



**SMART
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Data. Analysis. Solutions.

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Project Overview



- 2012-2014 Smart Police Initiative (SPI) grant from Bureau of Justice Assistance (BJA)
- Expand Stratified Policing implementation into the agency to offender-based strategies
- Conducting evidence-based research: High quality research to test effectiveness of a given strategy
- SPI Team

Key Hypothesis



- If the offender-based responses are implemented for offenders who live in high crime areas,
- There will be a reduction of crime in those areas
- Since the offenders are likely committing some of their crimes near where they live.

Project Overview

- Randomized controlled trial (RCT)
- Offender-based strategies implemented in long-term hot spots of property crime
- Application to other agencies:
 - ~ Use simple and realistic analysis of offenders
 - ~ Responses also realistic for suburban areas with average levels of crime and “average offenders”

Block Randomization

- Blocked on offenders per crime in each hot spot
- March 2012 – January 2013
- Offender data
 - ~ Only those living in PSL
 - ~ Arrested for burglary in PSL, St. Lucie County, Fort Pierce, and Martin County in past two years
 - ~ Adults and juveniles currently on felony probation
- Crime types
 - ~ Residential burglary
 - ~ Residential theft from vehicle

Block Randomization



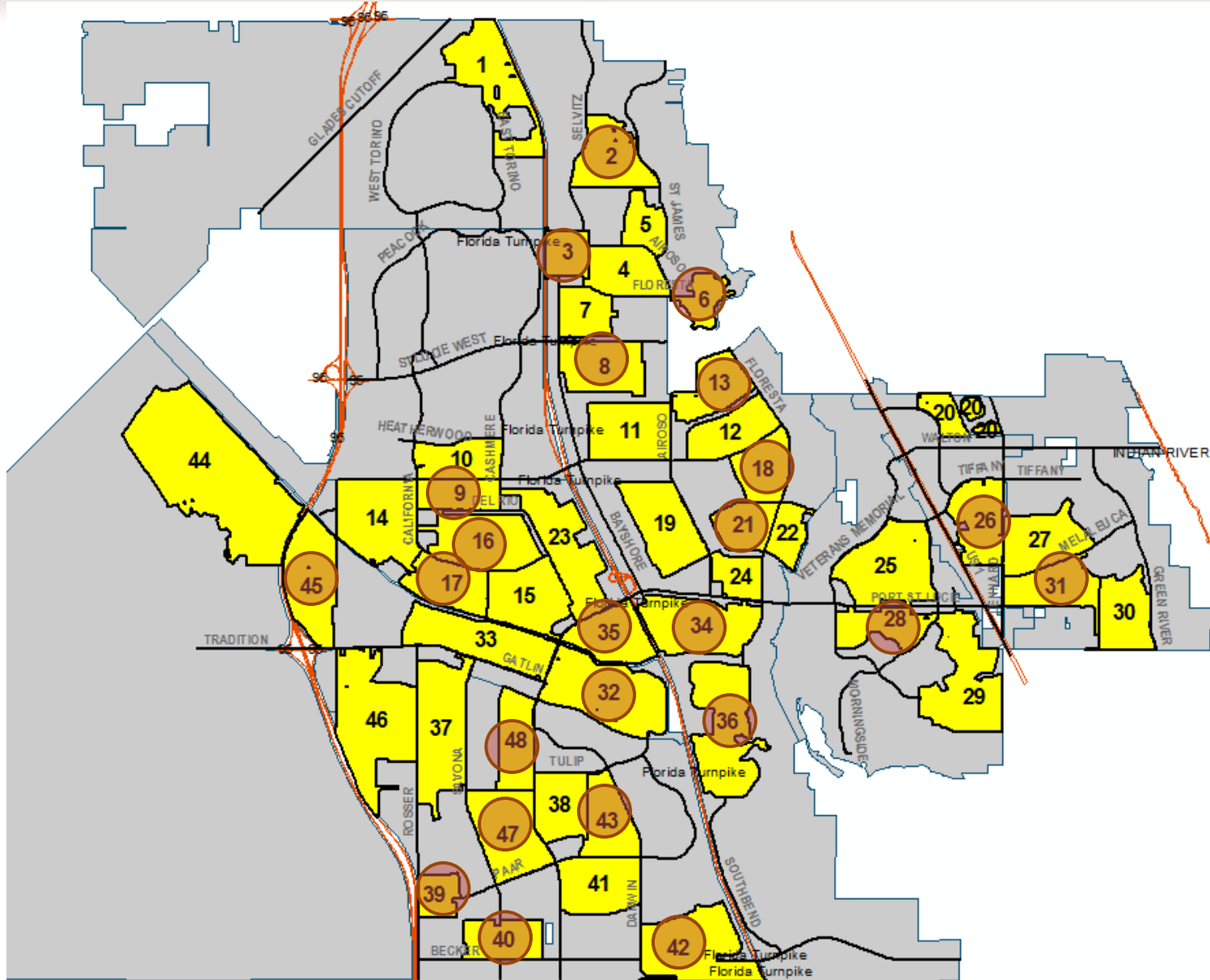
Hot spots (48)
24 Treatment and 24 Control
($df=48-6-1=41$)

Low offender/crime (12)
6 treatment
6 control

Medium offender/crime (26)
13 treatment
13 control

High offender/crime (10)
5 treatment
5 control

Residential Burglary and Theft from Vehicle Hot Spots Random Assignment Results



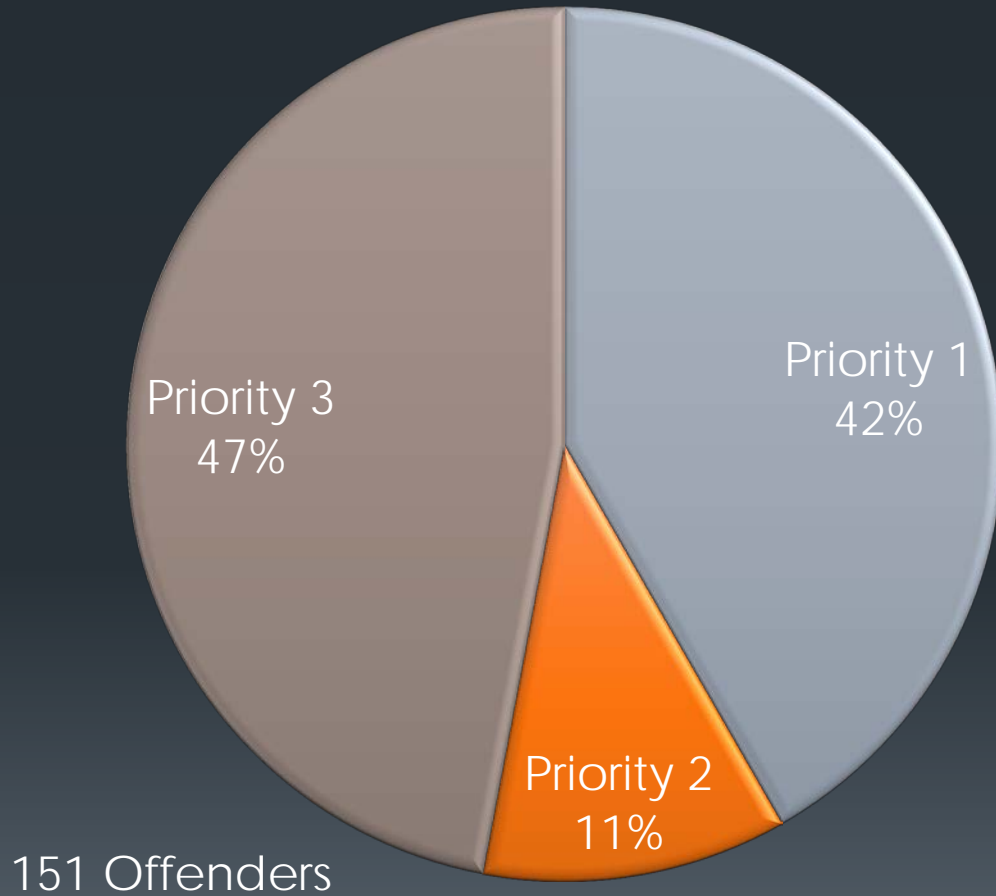
Initial Group Comparison

	Treatment Group N = 24		Control Group N = 24		T-Value	P-Value
	Mean	St. Dev	Mean	St. Dev		
Crime Per Offender	1.63	1.16	1.40	0.70	-1.07	0.29
Square Miles	0.58	0.23	0.73	0.44	-1.43	0.16
Population	3,026.58	1,068.05	3,471.38	1,395.98	-1.24	0.22
Housing	1,239.13	465.15	1,485.58	594.55	-1.60	0.12
Housing Density	2,304.99	1,071.67	2,350.06	927.48	-0.16	0.88

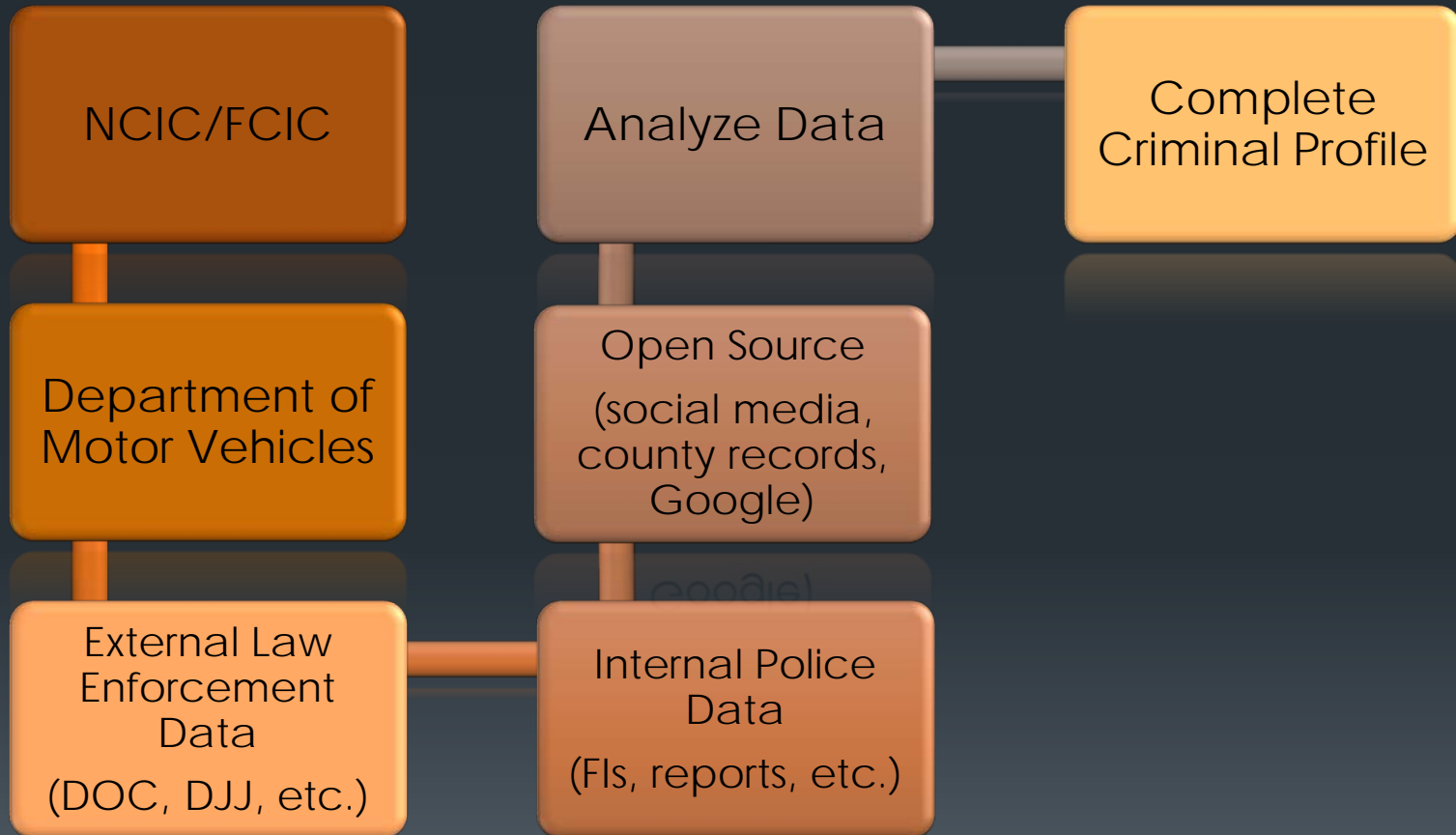
Prioritization of Offenders

- Priority 1  Arrested for burglary of a residence or a conveyance
- Priority 2  Felony probation and had a prior arrest for burglary
- Priority 3  Felony probation for drug offenses

Priority of Offenders Contacted



Data for Criminal Resume



Offender-Based Responses



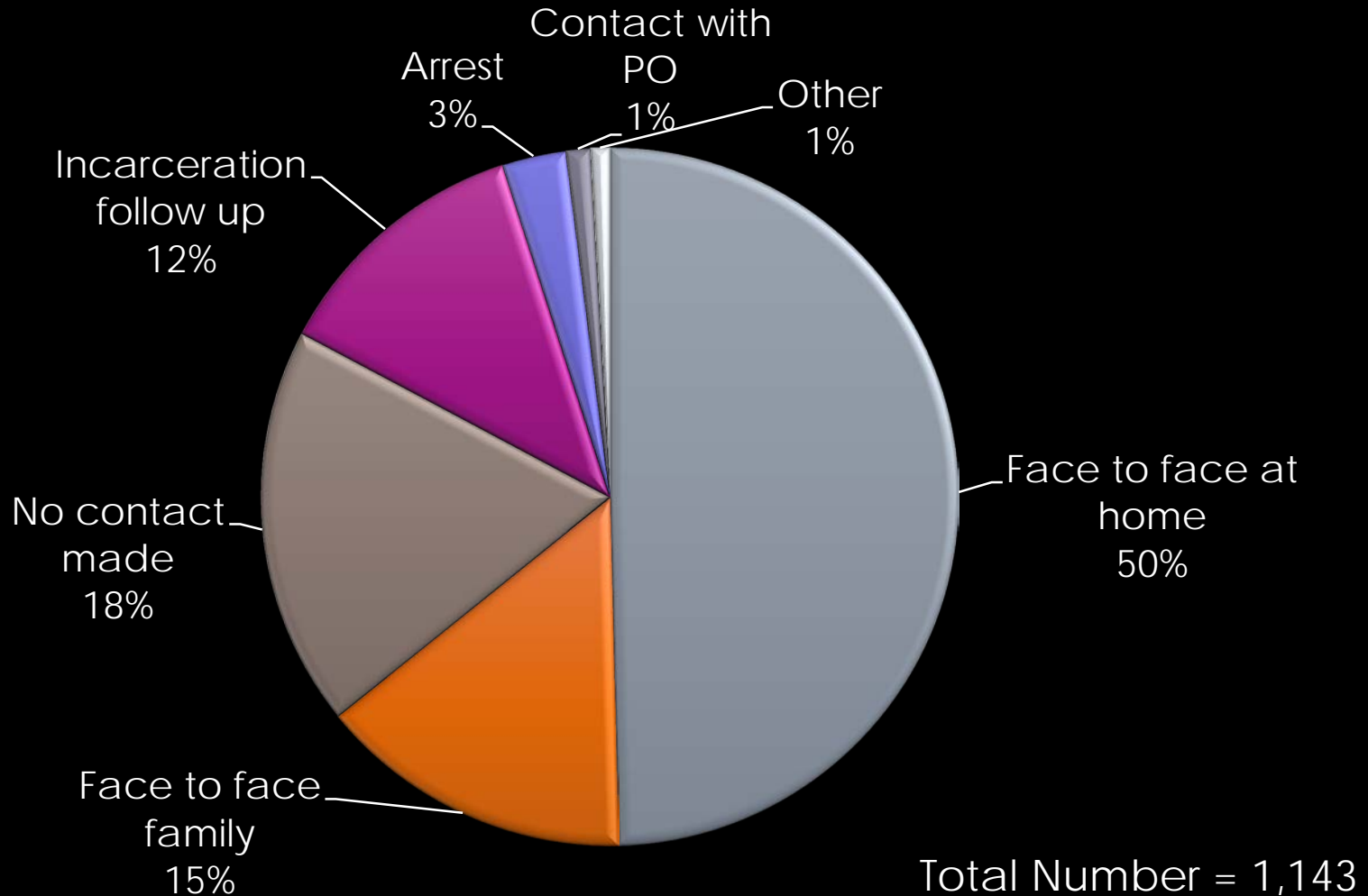
- Initial response begins based on initial analysis:
 - ~Verify offenders residence
 - ~Verify correctional status

- In depth responses based on criminal resume
 - ~Responses vary by nature of offender's activity
 - ~Work with other units (e.g., gang unit, narcotics) and divisions (e.g., patrol and CID) in the agency
 - ~Work with state attorney, judges, probation, parole, parents, offender

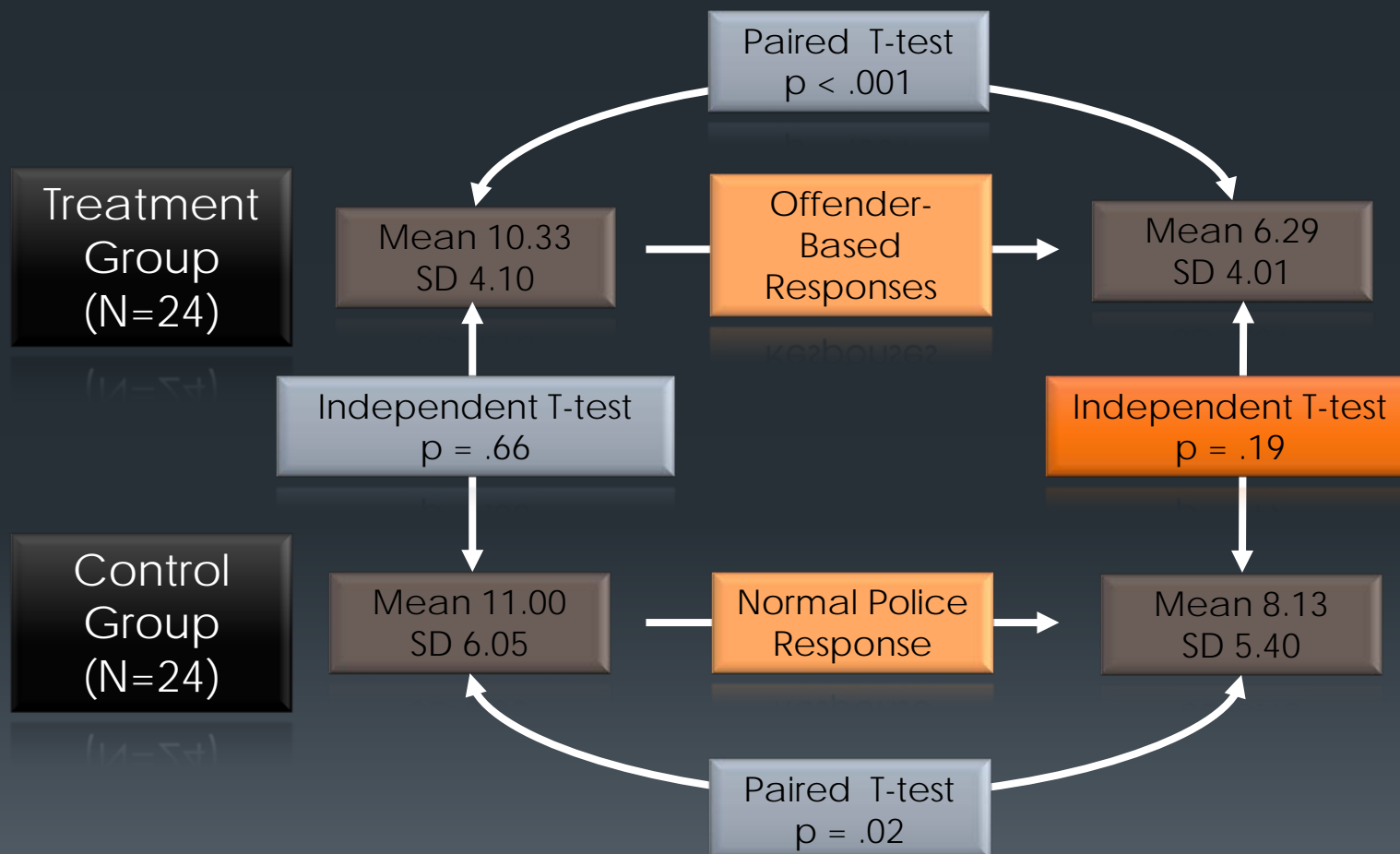
Continuous Response

- Curfew checks on offenders with sanctions
- Follow up with probation officers
- Face-to-face contact with offenders
 - ~ Referrals to programs (e.g., school, jobs)
 - ~ Family interaction
 - ~ Discuss stressors that may lead to re-offending
- Response barriers
 - ~ Offenders leave hot spot
 - ~ Offenders with no current sanctions

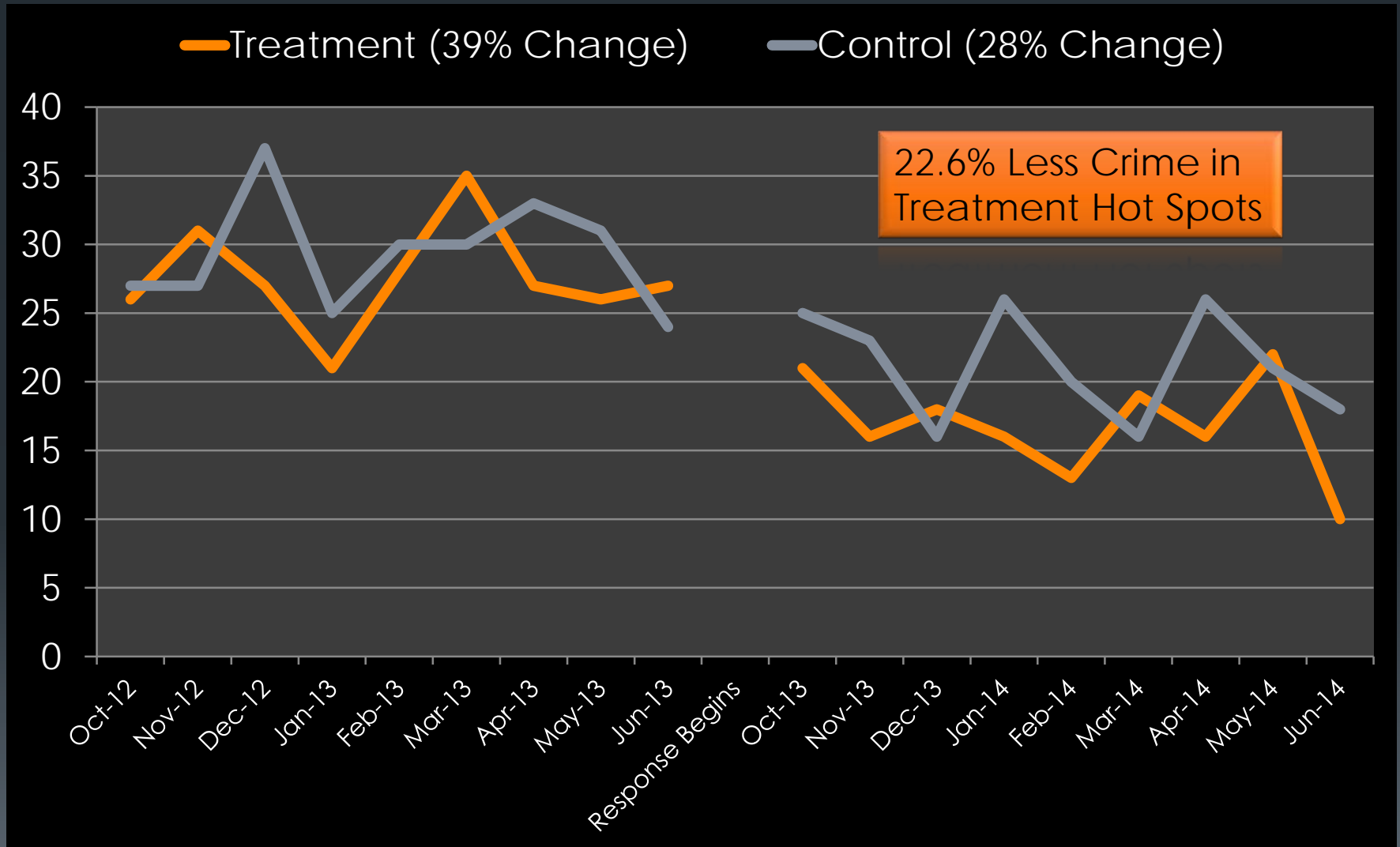
Contact Outcome Type



Experimental Impact Results



Crime Counts by Month



Offender-Based Police Response in Long-Term Property Crime Hot Spots Experiment: Results from Offenders

Port St. Lucie, FL Police Department
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Offender Interviews

- In home interviews with offenders and family members
- Purposive sample
- Conducted PSLPD project director
- Contact made similar to program contacts
- Program detectives not present
- Interviews focused on accountability of detectives/agency; impact of program on offenders (e.g., crimes, attitude, family, and overall life)

Offender Demographics

Race	Interviewees (N=34)	All Offenders (N=151)
White	17 (50%)	105 (70%)
Black	15 (44%)	41 (27%)
Hispanic	2 (6%)	5 (3%)
Age		
Under 18	7 (20%)	18 (12%)
18 to 25 years	21 (62%)	72 (48%)
26 to 35 years	2 (6%)	34 (22%)
36 and over	4 (12%)	27 (18%)
Sex		
Male	32 (94%)	133 (88%)
Female	2 (6%)	18 (12%)

Family Members Interviewed



- 29 family members interviewed
 - ~11 mothers
 - ~14 fathers
 - ~4 spouses

Results: Perception of Detectives

How do you feel about how the detectives have interacted with you (or your son/daughter/spouse) in their contacts?

- Appreciative, liked the detectives (respectful)
- Understood why the detectives were contacting them

Quotes:

- ~It felt they were helping; they were very respectful.
- ~The program is good and the detectives acted like they cared.
- ~At ease and comfortable with the conversation.
- ~I liked the detective. It seemed like they cared and wanted me to stay out of trouble.
- ~Doing their job; I'm ok with that.

Results: Criminal Activity

Did the contact with the detectives made you think twice about committing any new crimes? Influence you to stop associating with people you thought would get you in trouble?

- Made them “think twice” about committing crime
- Stopped going out as much with “bad” people

Quotes:

- ~Hell, yeah [while laughing]!
- ~The thought was always in the back of the head that they would check on me.
- ~Thought of it a few times but didn't.
- ~It made me think twice because the neighbors would see.
- ~He [husband] is not going out as much and not hanging out with certain people.

Results: Effect on Probation

Did the detectives influence you to follow probation or supervision more closely?

- Took sanctions more seriously
- Offenders with sanctions more responsive to the program

Quotes:

- ~It was a strain to get her to follow probation. The detectives helped make her listen to me [husband] more.
- ~He [son] always followed but this gave him an extra push.
- ~They made him understand how serious it was.
- ~The detectives never made it routine, so you never knew when they would come by versus probation officer who always comes by the same time and day.

Results: Effect on Family Relationships

Is your relationship with your family (son/daughter/spouse) better now than a year ago?

- Relationships and communication improved
- Detectives were additional “support” for the family

Quotes:

- ~I'm home more often and communicate more with my parents.
- ~He's staying out of trouble; being a better person; not committing crimes anymore.
- ~He listens to me more; we have better communication.
- ~We have more communication and go out as a family.
- ~He's spending more time at home.

Results: Overall

- Surprising: Consistently positive perceptions and impact on families
- Consistent with procedural justice research
- Program most effective with offenders with sanctions
- Detectives' personalities and interactions very important
- Detectives perceived differently and more influential than probation officers

Quotes:

- ~The interaction was very important; It has to be very relaxed interaction.
- ~It was important to have the same detective to build a relationship.
- ~The detectives acted like they were very concerned about our family's well-being.
- ~I recommend to keep the visits random.
- ~Having trust with the one detective versus the regular cops.

Contributions and Sustainability



- Highest quality research
- Examination of property crime
- Done in a typical suburban city with average crime
- Reduction of crime
- Positive attitudes and impact on offenders
- Example systematic implementation for other agencies



~Questions~



Raising the Bar for Evidence in Evidence-Based Policing

Using the Maryland Scale of Scientific Methods in SPI

Zoë Thorkildsen

March 4, 2015

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Introduction

- Research and evaluation in criminal justice varies considerably in methodological rigor
 - Pre-post comparisons → sophisticated regression techniques → randomized controlled trials
- When determining “what works” in criminal justice interventions, must consider methodological rigor
 - Applies both when considering impact and lack of impact

Maryland Scale of Scientific Methods

- “Preventing Crime: What Works, What Doesn't, What's Promising
 - 1997 report to Congress
 - Lawrence Sherman, Denise C. Gottfredson, Doris L. MacKenzie, John Eck, Peter Reuter, and Shawn D. Bushway
- Established the Maryland Scale of Scientific Methods
 - A 1 to 5 scale to assess methodological rigor of analysis of programs and interventions
 - Key factors are:
 - the level of control over other variables
 - the potential for measurement error, and
 - the statistical power of the analysis

Maryland Scale of Scientific Methods

Level 1

- Correlation between a crime prevention program and a measure of crime or crime risk factors at a single point in time.

Level 2

- Temporal sequence between the program and the crime or risk outcome clearly observed, or the presence of a comparison group without demonstrated comparability to the treatment group.

Level 3

- A comparison between two or more comparable units of analysis, one with and one without the program.

Level 4

- Comparison between multiple units with and without the program, control for other factors, or using comparison units that evidence only minor differences.

Level 5

- Random assignment and analysis of comparable units to program and comparison groups.

Boston SPI (Phase I) and the Maryland Scale

- Intervention: Safe Street Teams
 - Hot spots policing using POP strategies
- Methodology: Retrospective quasi-experimental
 - Propensity score matching techniques
 - Growth curve regression model examining violent crime over time
- Results: Significant reduction in violent crime in treatment v. control hot spots
- Maryland Scale: Level 4
 - Multiple units of analysis
 - Controlled for additional factors via PSM

Boston SPI



Safe Street Teams in action



Glendale SPI (Phase I) and the Maryland Scale

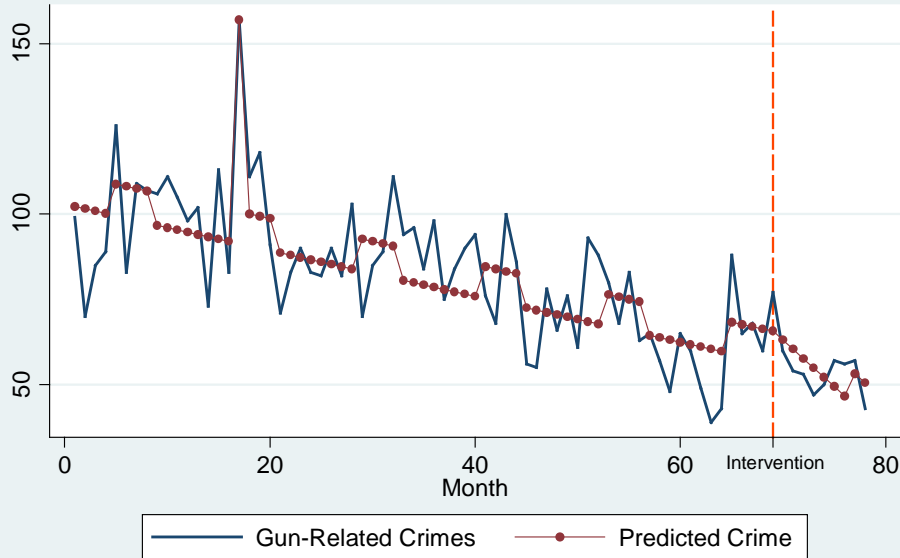
- Intervention: Reducing convenience store theft
 - CPTED principles at stores
 - Youth outreach discouraging theft
 - Targeted surveillance and patrol by officers
- Methodology: Difference-in-differences
 - Treatment stores v. control stores pre-post
- Results: Significant reduction in CFS at 5 of 6 targeted stores, overall CFS reduction of 42%
- Maryland Scale: Level 4
 - Multiple units
 - Control stores are demonstrably similar to treatment group
- Revised analysis using interrupted time series, also Level 4

Los Angeles SPI and the Maryland Scale

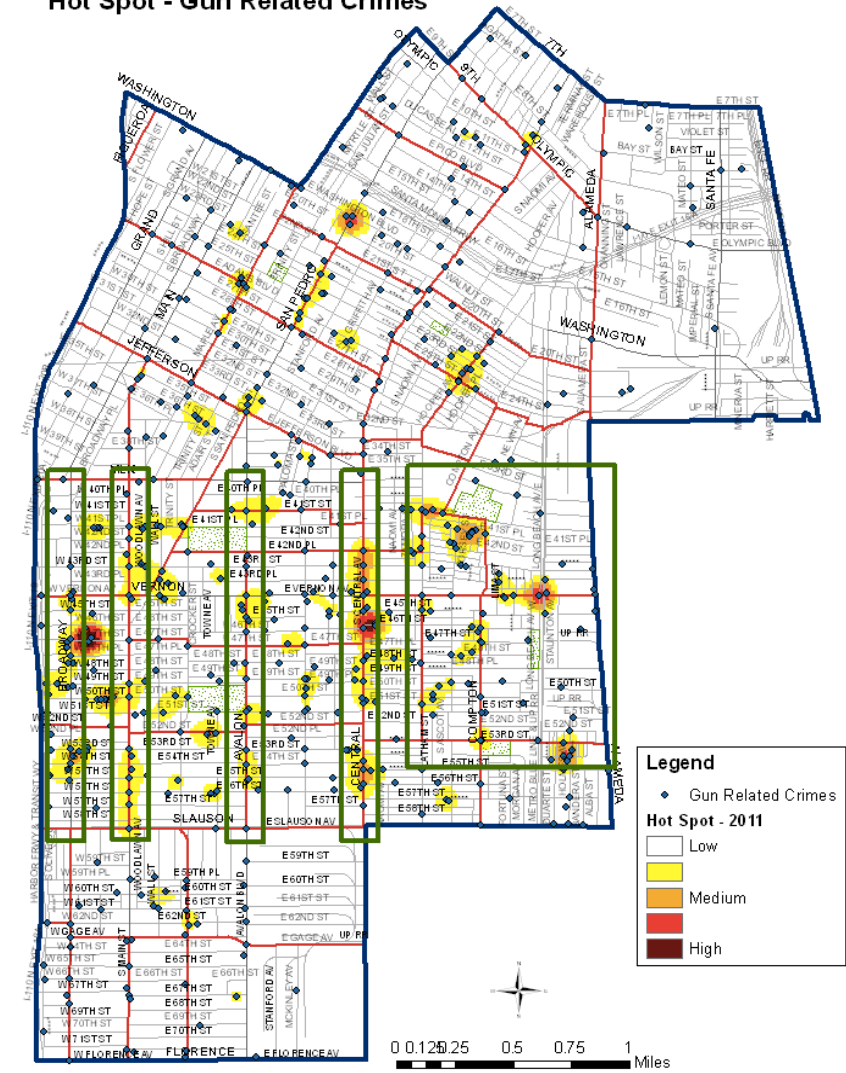
- Intervention: Operation LASER
 - Offender-based strategies: Crime Intelligence Detail
 - Place-based strategies: hot spot policing, POP
- Methodology: Quasi-experimental design
 - Interrupted time series
 - Treatment v. control hot spots
- Results: Significant reduction in violent crime, average of 5.4 fewer crimes per month
- Maryland Scale: Level 4
 - Pre-post comparison of crime trends controlling for existing trends
 - Includes comparison areas

Los Angeles SPI

Gun-Related Crimes in Newton
Jan 2006 to Jun 2012



Newton Area - 2011
Gun Related Crimes
Hot Spot - Gun Related Crimes



Palm Beach SPI and the Maryland Scale

- Intervention: Community outreach
 - Improving police legitimacy
 - Reducing victimization in immigrant community
- Methodology: Pre-post comparisons
 - Community survey results
 - Robbery crime and arrest rates
- Results: Improved community perception of police; initial spike in robberies then 22% decrease (not significant)
- Maryland Scale: Level 2
 - Pre-post comparison
 - Control area designated but implementation problems

Palm Beach SPI



Engaging Police in Immigrant Communities (EPIC) project

Philadelphia SPI and the Maryland Scale

- Intervention: Comparison of three methods
 - Foot patrol
 - POP
 - Offender-focused strategies
- Methodology: Randomized, controlled trials
 - 81 hot spots were deliberately assigned into three methods
 - Within each 27 hot spot group, treatment v. control was randomly assigned
- Results: Offender-focused strategies associated with a significant, 22% decrease in violent crime
- Maryland Scale: Level 5
 - Randomized controlled trials

Philadelphia SPI



Conclusions

- Methodological considerations must be incorporated during planning phases
- Randomized, controlled trials are the “golden standard” but not always appropriate or possible
- Effective use of analysis techniques can improve methodological rigor

Q & A