



City of Pittsburgh Bureau of Police

Use of Force
in the City of Pittsburgh:
Initial Report, 2010 through 2015

JULY 2016

Use of Force in the City of Pittsburgh: *Initial Report, 2010 through 2015*



CONTENTS

Introduction 1

Summary 2

Report 4

1. Introduction 4
2. Use of force data 4
3. Trend: a declining number of incidents 5
4. Use of force in other U.S. cities 7
5. The circumstances of resistance 7
 - Month, day and time 8
 - Location 9
 - Incident type 12
 - Type of resistance 13
 - Reason for force 14
 - Control techniques 14
6. Incident outcomes 17
 - Injuries 17
 - Charges 21
7. Demographics 23
 - Age 23
 - Female subjects 24
 - Race 25
8. Officers who encounter subject resistance 27
9. Action steps 29
10. Areas of inquiry 30

Endnotes 31

Appendices 32

APPENDIX A: Subject Resistance Report 32

APPENDIX B: Codes 34

APPENDIX C: Tiers 37

APPENDIX D: Calculation for forms of resistance 38

APPENDIX E: Calculating Racial Disproportionality in SRRs 39

INTRODUCTION

By Chief Cameron McLay, City of Pittsburgh Bureau of Police

This report is one in a series issued by the Pittsburgh Bureau of Police, as part of our commitment to transparency and accountability.

These reports present key data and statistics used by the Bureau to examine its policies and training and to measure the quality of its work of ensuring public safety. Quality policing is characterized by fairness in how we treat all citizens, partnerships with the community to prevent and solve crimes, and trust from the people we serve. On occasion, quality policing will include use of force — but only when necessary to make an arrest, prevent an escape, in self defense and/or to save others from bodily harm. This is why our laws and policies make it clear that use of force is permissible but also that police should never use force excessively or as a substitute for preventing resistance in the first place.

To begin to get a picture of use of force in Pittsburgh, I requested an analysis of summary statistics drawn from the thousands of reports filed by police officers over the past six years. This initial report provides the data we need to begin to understand the types of force police use; how often force is used; the reasons why force is used; and the type of incidents that result in injuries. It also begins to look at potential disproportionality in the use of force, an important issue that will require careful attention.

Unfortunately, it is difficult to answer the obvious question: Are we doing better or worse than other cities? Research on use of force is less advanced than I wish it were, due to the fact that many police agencies don't collect this information, those that do may use differing definitions (e.g., some include "verbal commands" as force and others do not), and most do not report their data publicly.

This analysis, like all similar analyses conducted across the country, is limited to the use-of-force reports filed by Pittsburgh Bureau of Police officers and, as such, may understate the frequency with which force is being used. This limitation should not keep us from analyzing and presenting the data to the community; to the contrary, regular use and sharing of data is one of the best ways to improve reporting quality. Equally important is putting in place quality assurance processes to ensure full compliance with our reporting policies.

In the end, what matters is whether 1) our Bureau has policies that guide officers to use evidence-based practices in use of force; 2) we train our police and other personnel well; and 3) we have a strong, fair system of accountability. To ensure proper use of force — and contribute more generally to quality policing—the leadership of the Bureau is addressing each of these crucial management responsibilities, as further outlined at the end of this report.

The Bureau would like to thank Alfred Blumstein and Wilpen Gorr, Carnegie Mellon University, and David Harris, University of Pittsburgh School of Law, for their review of this report.

SUMMARY

Background

From 1997 through 2002, the City of Pittsburgh Bureau of Police (PBP) was under a federal consent decree to track each incident in which an officer used force with a subject. Shift supervisors and commanders were charged with reviewing these “Subject Resistance Reports” (SRRs) to determine if the police involved had followed PBP policies and procedures. Even after the consent decree was lifted, the PBP continued to require these reports.

The PBP compiled the information from thousands of these reports involving use of force and has analyzed this information to identify trends and to better understand the dynamics of use of force by its officers, including reasons for the incidents and characteristics of the subjects.

This report is the first such examination of use of force in the City of Pittsburgh. It should be noted that this type of report is rare throughout the country, in large part because few police agencies report use of force. And while at least one study found a dozen cities that shared use of force information, there continue to be differing definitions of use of force. This lack of standardization of definition is more than just a semantic issue. The National Institute of Justice reports that there are no national standards to guide the implementation of use of force in the United States. Hundreds of police chiefs, other government officials and researchers, convened in early 2015 by the Police Executive Research Forum (PERF), agreed that there is a need to re-engineer training and policies for police use of force.

Recognizing the limitations in comparative and baseline data, this report focuses on creating a picture of the number and circumstances of PBP SRRs from 2010 through 2015. From this information, we know that:

- Use of force in the City of Pittsburgh is rare. During 2014 and 2015, the total number of use of force incidents averaged just over 1,500, which is less than one percent of all PBP calls-for-service.
- The number of incidents involving police use of force has fallen by 16 percent during the study period (from a high of 1,700 in 2013), but not as quickly as arrests have decreased during that same period of time.

- One in 10 arrests involves use of force.
 - Police most often use force in the context of an arrest (82 percent for on-view arrests and three percent for warrant arrests).
- In Pittsburgh, 34 percent of use-of-force incidents resulted in injury to a suspect (2010 through 2015). In the 12 cities that were part of a national study, the comparable rate was 39 percent.
 - Injuries to both subjects and police are down significantly. There has been a 35 percent reduction in subject injuries and a 32 percent reduction in officer injuries.
 - The rate of injuries is now one in three subjects and one in 10 officers.
- Over the past six years, there has been a higher-than-expected use of force rate for individuals who are black, even when controlling for the differences in arrest patterns by race. However, this disproportionality is decreasing and the 2015 rate is half the 2010 rate.
- Most officers use force infrequently—between one and five times over the six years studied. However, 120 officers reported using force more than 25 times.
 - Officers who use force more frequently tend to experience lower rates of injury themselves but are more likely to injure a subject.

What is Use of Force?

The International Association of Chiefs of Police defines use of force as “The amount of effort required by police to compel compliance by an unwilling subject” (IACP 2001), to protect an individual or group or for self-defense. There is no “universal set of rules that governs when officers should use force and how much,” according to the National Institute of Justice (NIJ, 2015).

In Pennsylvania, the Crimes Code, Section 508 says that a peace officer is “justified in the use of any force which he believes necessary to effect the arrest and of any force which he believes to be necessary to defend himself or another from bodily harm while making the arrest.” The Code also says a peace officer who “has an arrested or convicted person in his custody is justified in the use of such force to prevent the escape of the person from custody” as the officer would be justified in using if he were arresting the person. It also states that people (not just officers) can use force “when the actor believes that such force is immediately necessary to prevent such other person from committing suicide, inflicting serious bodily injury upon himself, committing or consummating the commission of a crime involving or threatening

bodily injury, damage to or loss of property or a breach of the peace.”

A peace officer is justified in using deadly force “only when he believes that such force is necessary to prevent death or serious bodily injury to himself or such other person, or when he believes both that such force is necessary to prevent the arrest from being defeated by resistance or escape; and the person to be arrested has committed or attempted a forcible felony or is attempting to escape and possesses a deadly weapon, or otherwise indicates that he will endanger human life or inflict serious bodily injury unless arrested without delay.”

Locally, the PBP’s policy forbids excessive uses of force and requires officers to report any use of force, *whether or not it caused injury*. Uses of force might include physical force, chemical force (such as pepper spray), any discharge of a Taser or other kinetic energy projectile, use of impact weapons such as a baton, and use of “weapons of last resort” (Policy Order Number 12-6, dated 1/3/05). Officers must also report when they used verbal commands.

While this report shows that force is used less frequently than it has been in the past, PBP recognizes that it must be vigilant in monitoring the application of force and its disproportionate effects, as well as ensuring that police policy and procedure, training, and supervision provide the guidance and accountability for quality policing. The PBP has identified several action steps, including examining racial disproportionality; revamping its policies, training and communications to align with the fundamental role of police as problem-solvers who work with citizens to prevent crime and in accordance with the highest standards for policing; making use of force an element of the officer accountability system that the PBP is building; and conducting case reviews on critical and/or emerging issues. The PBP is committed to continuing to collect and publicly report on use of force data and actions.

REPORT

1. Introduction

This report is an analysis of use of force by City of Pittsburgh Bureau of Police (PBP) police officers from 2010 through 2015. It begins with a description of trends in the number of reported use of force incidents, provides information on incidence made available through a study of 12 police agencies, and examines the circumstances surrounding use of force in Pittsburgh, including the months and times of day when incidents are most likely to occur and the events that frequently preceded the use of force. It concludes by presenting findings on the charges commonly filed against subjects, their demographics and the distribution of incidents across the police force.

2. Use of force data

In almost every contact between the police and the public in the City of Pittsburgh, officers maintain safety and order without using force. Of the PBP's 360,000 average annual calls for service (2010 through 2015), force was used in an estimated 1,500 incidents annually, which is less than one percent of calls (0.4%).

The PBP began tracking police use of force in 1997, as part of a federal consent decree and in the wake of public protests over policing approaches and deaths in police custody. The court order led the police to implement a system for documenting use of force and a protocol for training and supervision.¹ That consent decree — and the requirement to track use-of-force incidents — was lifted in 2001, but the PBP has continued to both train its officers in appropriate use of force and require them to record detailed reports of each incident through Subject Resistance Reports (SRRs).

The SRRs² records basic incident details, including:

- Initial reason for police contact (incident type)
- Types of resistance by the subject (reason for use of force)
- Methods used to control the subject (tactics)

¹ Vera Institute of Justice, "Turning Necessity Into Virtue: Pittsburgh's Experience with a Federal Consent Decree," http://www.vera.org/sites/default/files/resources/downloads/Pittsburgh_consent_decree.pdf

² A complete SRR template can be found in the Appendices.

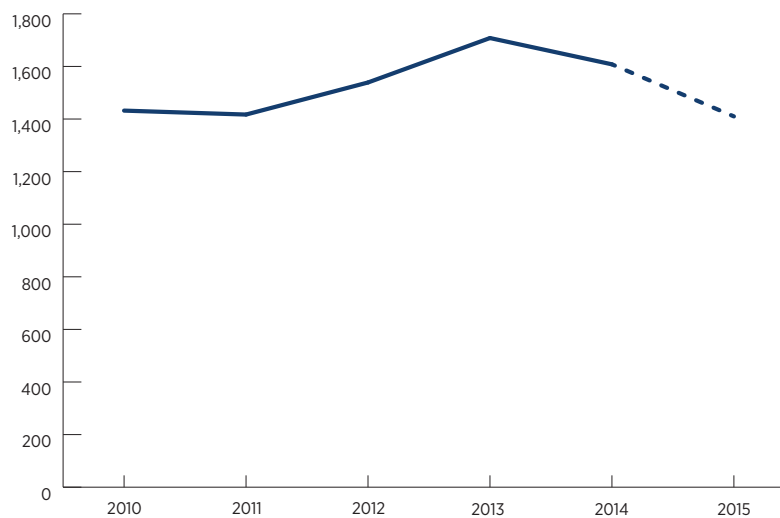
- Demographics of the subject
- Injuries sustained by the subject and/or officer
- Location, date and time of the occurrence
- Charges filed

The data used in this analysis were retrieved from the PBP's Automated Police Reporting System (APRS) and include nearly every field available on the SRR form. The report limits its analysis to subject resistance (SR) incidents that occurred from January 1, 2010 through October 31, 2015.

3. Trend: a declining number of incidents

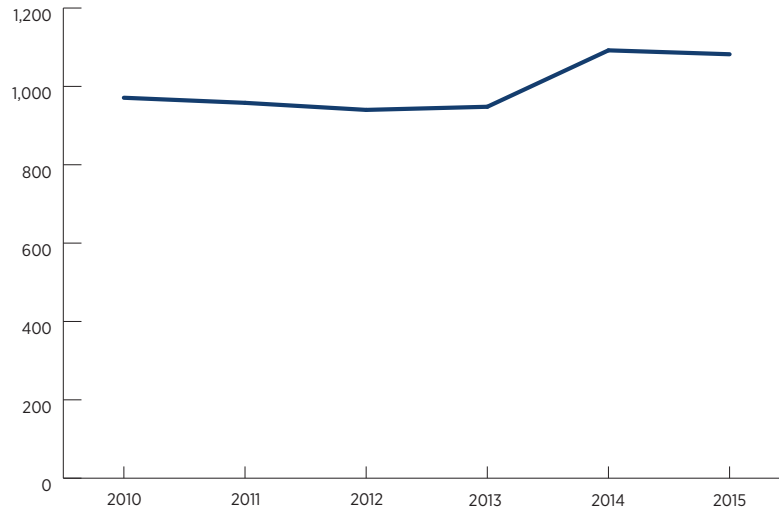
Police officers reported approximately 1,200 SR incidents in the City of Pittsburgh during the first 10 months of 2015 and **2015 likely will conclude with just over 1,400 reported incidents.** As shown in **Figure 1**, this would represent a **decline of 16 percent from the six-year high** of approximately 1,700 SRRs in 2013.

FIGURE 1: SRRs, 2010 through 2015 (projected)



Although the total number of SRRs has fallen, the decrease has not kept pace with the drop in the total number of arrests — so, SRRs as a share of arrests are elevated for 2014 and 2015. This is shown in **Figure 2**, which provides the number of SRRs per 10,000 arrests for the six-year period. (The 2015 rate is derived from SRR data from January through June, the only period for which 2015 arrest data are available.)

FIGURE 2: SRRs per 10,000 arrests, 2010 through June 2015



Percentage change of arrests versus percentage change of SRRs during the study period are shown in **Table 1**. Between 2013 and 2014, arrests fell by 18 percent while SRRs had a more modest six percent decline.

TABLE 1: Total and percent change in SRRs compared to arrests, 2010 through 2015

YEAR	SRRS		ARRESTS	
2010	1,432	-	14,741	-
2011	1,417	-1%	14,787	0%
2012	1,539	9%	16,370	11%
2013	1,708	11%	18,022	10%
2014	1,608	-6%	14,722	-18%
2015 (YTD)	685	-	6,331	-

4. Use of force in other U.S. cities

Many police departments do not collect use of force incident information and few report it publicly, so it can be difficult to compare SRR rates. Any attempt at comparison is complicated by the differences in definitions that jurisdictions use (e.g. definition of force, definition of an injury) and whether officers are compelled to report use of force.

Despite those difficulties, the University of South Carolina Research Foundation conducted an exploratory study of use of force across 12 cities, each with at least 100 sworn police officers and processes for collecting use of force information consistently and storing it digitally (Smith et al., 2009). The study's descriptive statistics of over 20,000 force events across these sites showed the following (where Pittsburgh data are available and data collection methods are roughly comparable, they are included):

- In the 12 cities, 39 percent of incidents resulted in injury to a suspect. In Pittsburgh, from 2010 through 2015, 39 percent of incidents resulted in injury to a suspect.
- In the 12 cities, 14 percent of incidents involved an officer injury. In Pittsburgh, the comparable rate from 2010 through 2015 was 10 percent.
- Fifty-six percent of incidents in the 12 cities involved physical force by the officer.
- In the 12 cities, the suspect physically resisted in 77 percent of incidents; when they resisted, they were more likely to be injured. In Pittsburgh, suspects physically resisted in 47 percent of incidents from 2010 through 2015.³
- In the 12 cities, officers used a CED (conducted energy device such as a Taser) in 22 percent of incidents and an OC (chemical spray) in 23 percent of incidents.
- "Suspects were less likely to be injured if the department had a policy that restricted OC or CED usage to defensive resistance or greater, rather than against passively resistant suspects" (Smith et al., 2009).
- In the analysis of use of force in 12 cities, researchers found that the odds of suspects being injured were marginally higher if they were white and older, compared with other groups. (Smith, et al., 2009)

³ Calculated as the sum of the following categories as shown in **Figure 8**: active resistance, assaultive behavior and deadly force. Note that officers can use more than one category of subject resistance in their reports.

In a separate study that surveyed eight police agencies about their policies on use of force, researchers found that 80 percent of the agencies had a use of force continuum, but there was no standard policy using empirical evidence to guide officers in their use of tactics (Terrill et al., 2011).

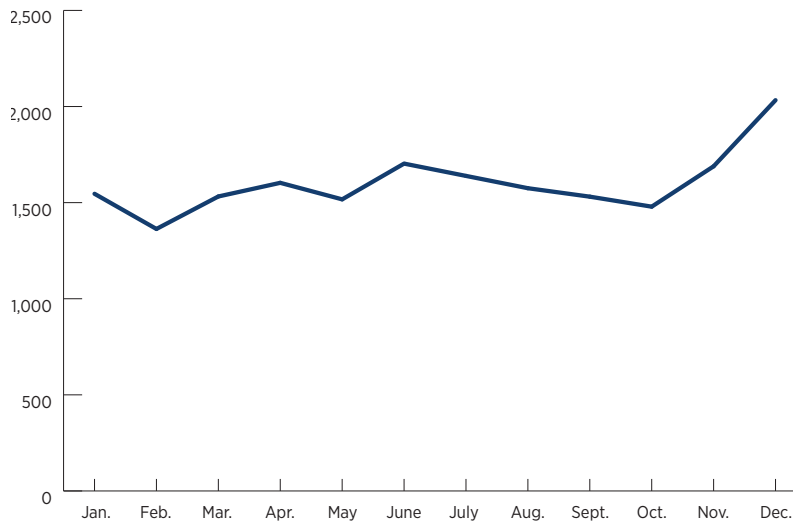
5. The circumstances of resistance

PBP SRR data offer insight into the times and locations of SR incidents, the initial reasons for contact between subjects and the police, the subject behaviors that contributed to use of force decisions, and the most common police responses to SR. These circumstances, taken together, illustrate the complexity of SR and offer responding officers an opportunity to better anticipate and respond to escalating risk.

Month, day and time

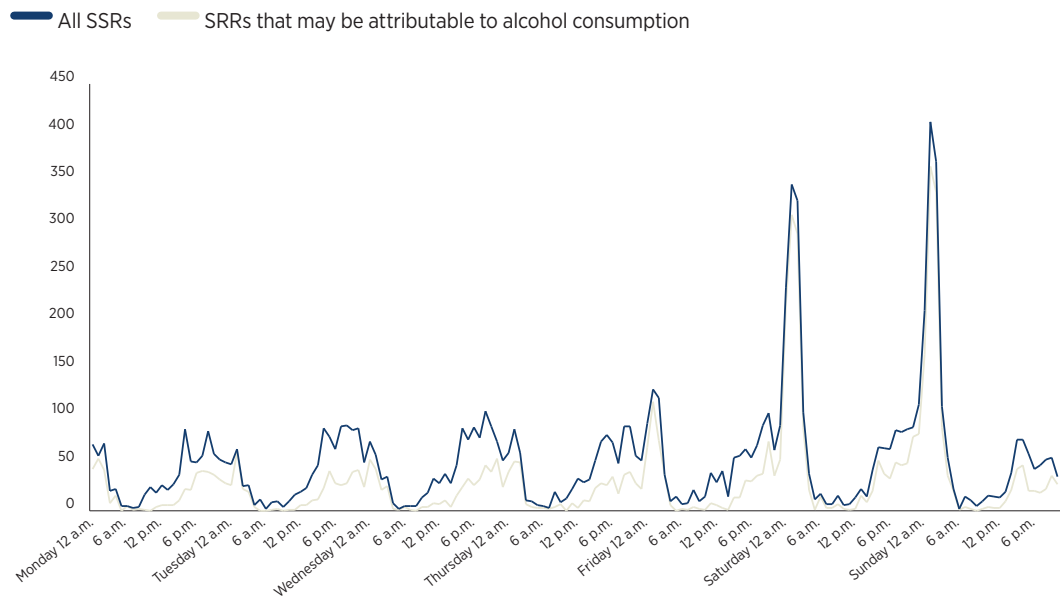
SR incidents generally reflect trends in crime and arrest, with the highest levels reported in November and December. There are, however, certain times of the year when reports of SR depart noticeably from rates of crime or reported arrests. **Figure 3** plots the number of SRRs per month as a function of arrests.

FIGURE 3: SRRs per 10,000 arrests, by month, 2010 through 2014



SR incidents also vary by time of day and day of the week. **Figure 4** shows the total number of incidents reported hourly, by day, as well as the number of SRRs that involved alcohol. This chart suggests that SRRs increase predictably at night, with the greatest number of SRRs reported on Fridays and Saturdays, and that these weekend night increases track with increases in alcohol consumption by resisting subjects. Since 2010, there has been an increase in SRRs that culminated in a charge related to reckless or impaired driving, alcohol consumption or possession, or public disorder, including public intoxication or urination, between 9 p.m. Friday and 3 a.m. Saturday and between 9 p.m. Saturday and 3 a.m. Sunday.

FIGURE 4: Total SRRs by day of the week and time of day, compared to SRRs related to alcohol consumption, 2010 through 2015



SR incidents that culminate in alcohol-related charges form a larger share of all reported incidents during these times of elevated SRRs, indicating that much of the increase in SRs that are reported on weekend nights is fueled by alcohol consumption. As shown in **Table 2, offenses attributable to alcohol were linked to 85 percent of SRRs on Friday nights and 84 percent on Saturday nights, compared to just 59 percent of overall offenses.**

TABLE 2: Percentage of total SR incidents that culminate in an alcohol, reckless driving or public disorder charge, 2010 through 2015

TIME	SHARE OF SRRS
Overall	59%
Thursday: 9 p.m.-3 a.m.	67%
Friday: 9 p.m.-3 a.m.	85%
Saturday: 9 p.m. -3 a.m.	84%

Location

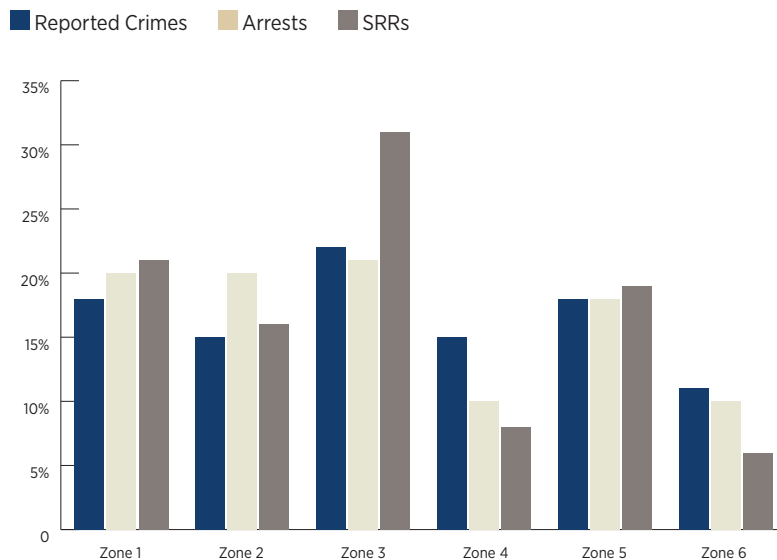
SRRs vary by the six police patrol zones and there has been little change over time in the share of incidents that occur by zone. **Table 3** lists the percentage of SRRs recorded in each zone from 2010 through 2015. Zone 3 consistently reports the largest share of SRRs and Zones 4 and 6, the smallest shares.

TABLE 3: Trends in the number of SRRs and share of SRRs, by police zone, 2010 through 2015

ZONE	2010		2011		2012		2013		2014		2015	
1	304	21%	330	24%	294	19%	337	20%	369	23%	219	18%
2	266	19%	216	15%	214	14%	254	15%	259	16%	206	17%
3	416	29%	404	29%	483	32%	527	31%	518	32%	368	30%
4	99	7%	103	7%	145	9%	142	8%	108	7%	97	8%
5	253	18%	268	19%	293	19%	343	20%	265	17%	253	21%
6	78	6%	75	5%	98	6%	89	5%	84	5%	68	6%
Total	1416	100%	1396	100%	1527	100%	1692	100%	1603	100%	1211	100%

To determine whether this distribution of SRRs across Pittsburgh’s six zones aligns with expectations, given the reported crimes and arrests in the zone, **Figure 5** plots percentage of reported crimes, arrests and SRRs by zone. When compared to its contribution to total crimes and arrests, Zone 3 appears to produce a disproportionately high share of SRRs. In contrast, Zones 2, 4 and 6 reported fewer than expected SRRs. It is important to note, however, that in zones with higher-than-average rates of drug, violent, property or public order crime, SRRs would be expected to outpace any measure of overall crime, as these categories are associated with SR.

FIGURE 5: Percentage of total SRRs that occurred in each police zone compared to reported crimes and arrests, 2010 through 2015

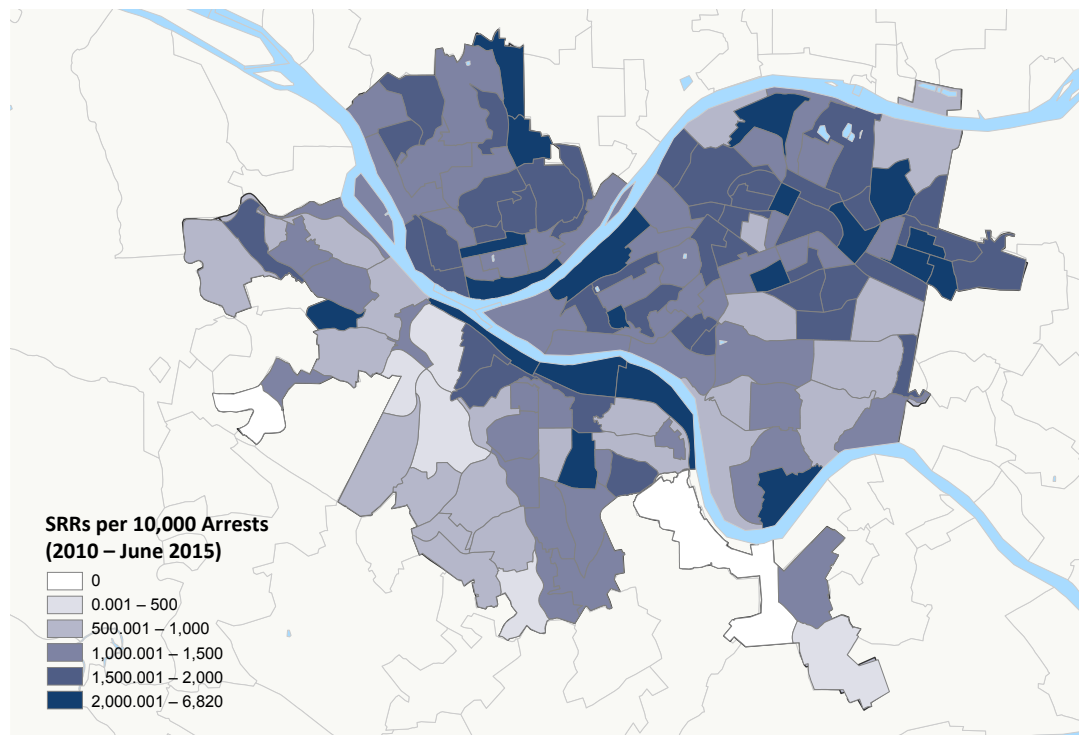


Since police zones are broad geographic units of analysis, examining SRRs by Census tract can offer insight into how they vary by location. The map in **Figure 6** shows the number of SRRs per 10,000 arrests for each City of Pittsburgh Census tract, from January 2010 through June 2015. The tracts without color indicate that no SRRs have been reported in that location since 2010.

The map depicts higher than average rates of SRRs in the Southside Flats and in pockets of the North Side and East End. The Southside Flats has a high level of SRRs, even when compared to the total arrests that take place there. These extreme SRR rates may be attributable, in part, to the nature of arrests in the Southside, a neighborhood with many bars, nightclubs and concert venues and, therefore, a high percentage of public order offenses—which police cite as reasons for use of force in a large share of their SRRs. It also may be due to an increased concentration of police who patrol this area.

High SRR rates in the North Side and East End coincide with neighborhoods experiencing high rates of crime. Like the Southside Flats, the high levels of resistance by subjects may be attributable to the particular blend of crimes that are taking place in these tracts and to increased concentrations of police officers, which make it more likely that police will encounter subjects who are committing other offenses, like public disorder and reckless driving, which tend to be related to high levels of SR.

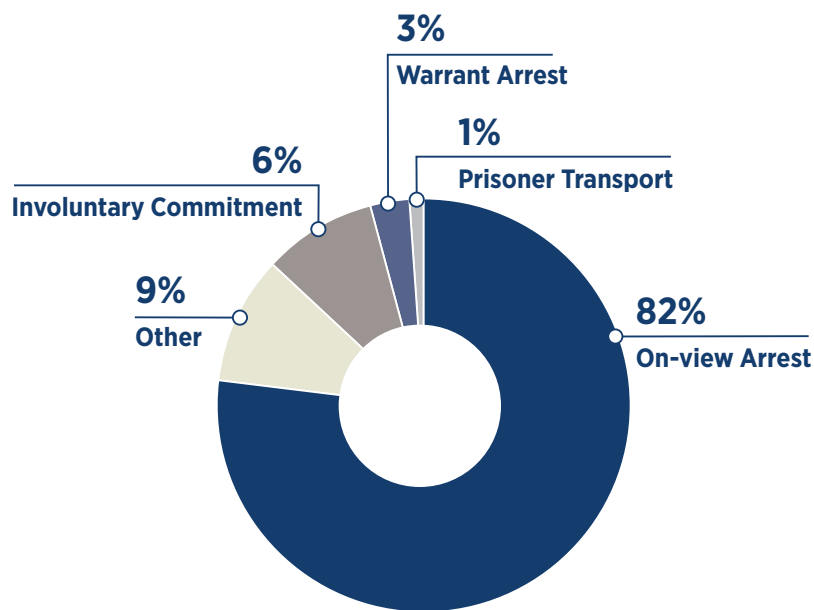
FIGURE 6: SRRs per 10,000 arrests for each Census tract in the City of Pittsburgh, 2010 through 2015



Incident type

On each SRR, police officers categorize the “incident type” from among the following five options: on-view arrest, warrant arrest, involuntary commitment, prisoner transport or “other.” From 2010 through 2015, most SR incidents resulted from some form of attempted arrest: **82 percent of subjects resisted during an on-view arrest and three percent resisted during a warrant arrest.** SRs occurred during “other” circumstances in nine percent of the incidents and during an involuntary commitment in six percent of the incidents. **Figure 7** shows SR by incident type.

FIGURE 7: Percentage of SR incidents by incident type, 2010 through 2015



While on-view arrests declined modestly as a share of all incident types during the study period, it remained the most common reason for contact between subject and police. **Table 4** shows that on-view arrests are cited in SRRs less frequently in 2014–2015 than they were in 2010, when they appeared in 86 percent of all reports, while involuntary commitment has been increasing as a share of incident types.

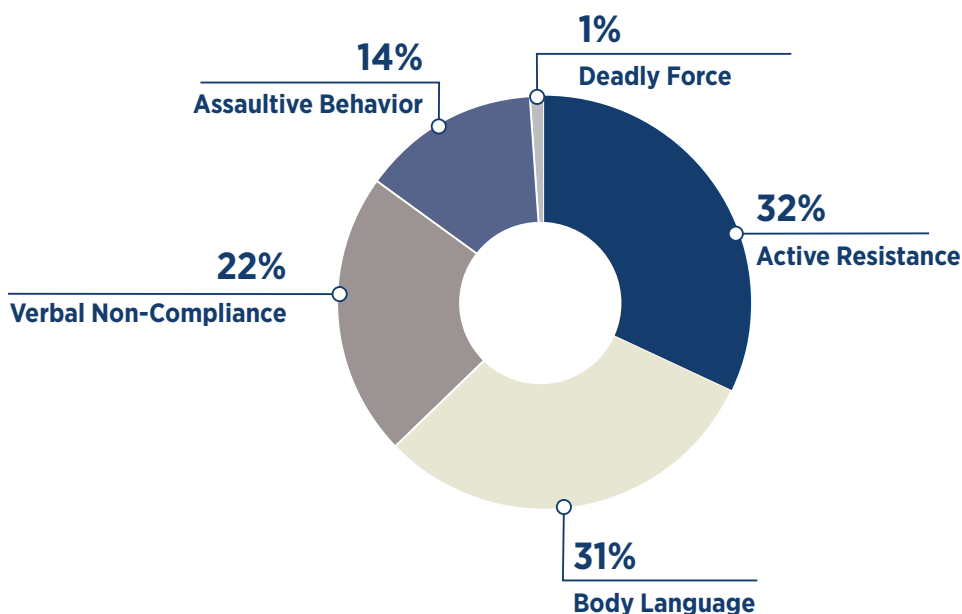
TABLE 4: Trends in SR incident types, 2010 through 2015

	2010	2011	2012	2013	2014	2015
On-View Arrest	86%	85%	81%	82%	79%	77%
Warrant Arrest	1%	2%	3%	2%	4%	3%
Involuntary Commitment	4%	5%	6%	7%	7%	9%
Prisoner Transport	1%	1%	1%	1%	1%	1%
Other	8%	7%	9%	8%	10%	10%
(N)	1,432	1,417	1,539	1,708	1,608	1,222

Type of resistance

Police officers also report on the type of resistance that a subject exerted prior to and during a use of force incident. From 2010 through 2015,, police most frequently cited active resistance (defined as “physical, affirmative actions to prevent officer control; No attempt to harm officer”). They also frequently noted resistance in the form of body language, verbal non-compliance and assaultive behavior (defined as “physical attempt to cause bodily harm to officer or another”). In just **one percent of SRRs, officers reported that subjects employed deadly force, or “resistance likely to cause serious bodily harm to officer or other.”** Figure 8 shows the types of resistance reported in the SRRs, by percentage. Note that a subject can display more than one type of resistance over the course of a single encounter.

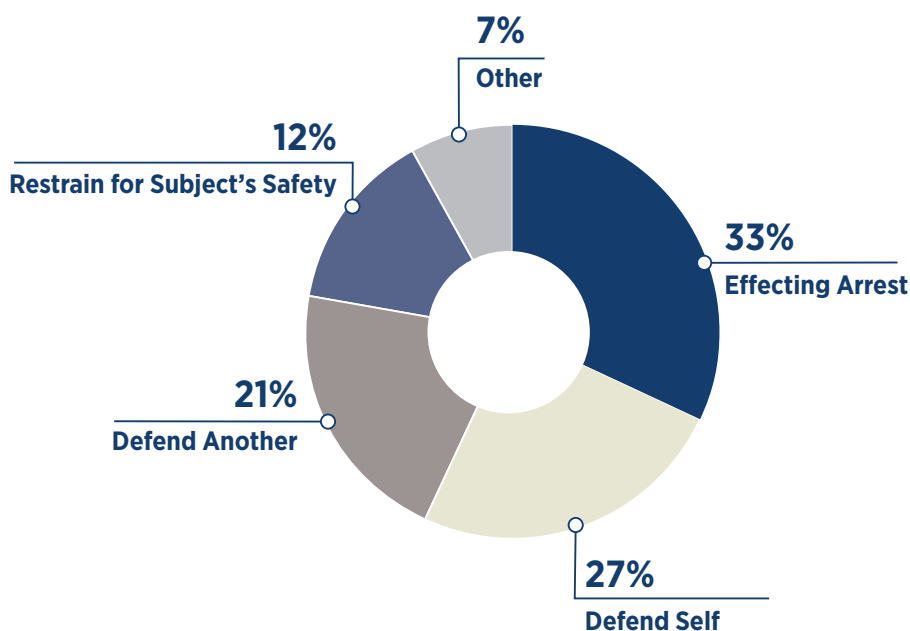
FIGURE 8: Percentage of SR incidents by category of subject resistance, 2010 through 2015



Reason for force

In completing their SRRs, police officers select at least one of five reasons for using control techniques with a subject. These “initial reasons for use of force” include effecting arrest, defending self, defending another, restraining the subject for his/her safety and “other.” As shown in **Figure 9, police officers were most likely to cite “effecting arrest” as the reason for force.** In 60 percent of incidents, officers reported they needed to use force for the protection of an officer, subject or bystander.

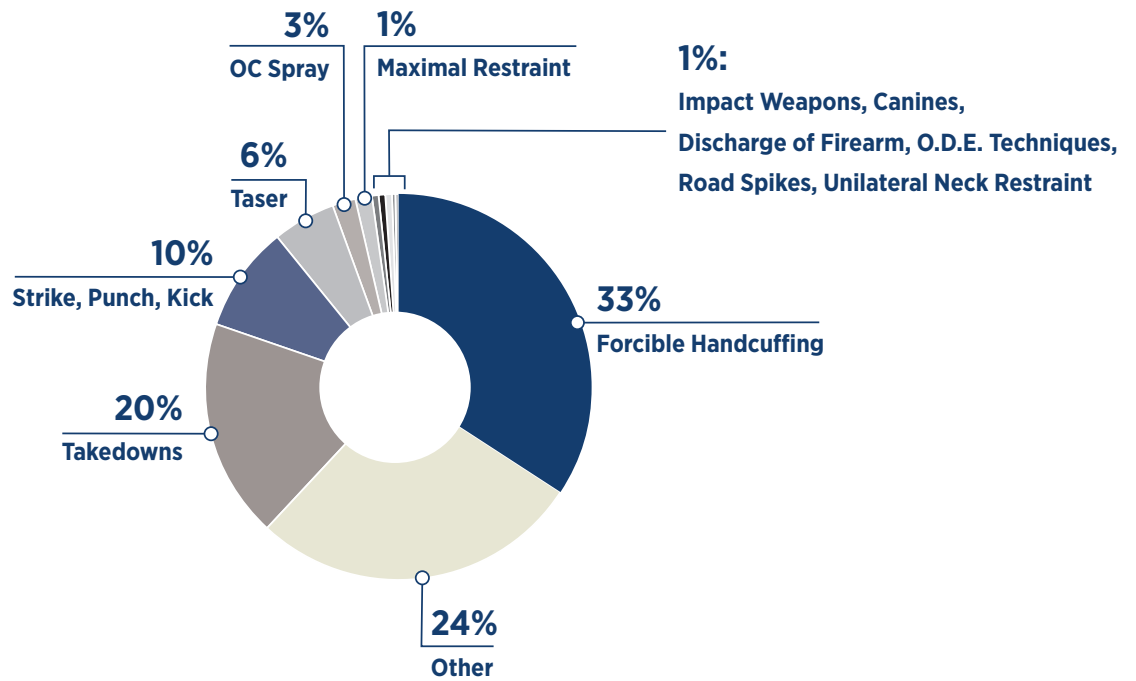
FIGURE 9: Percentage of SR incidents by initial reason for force, 2010 through 2015



Control techniques

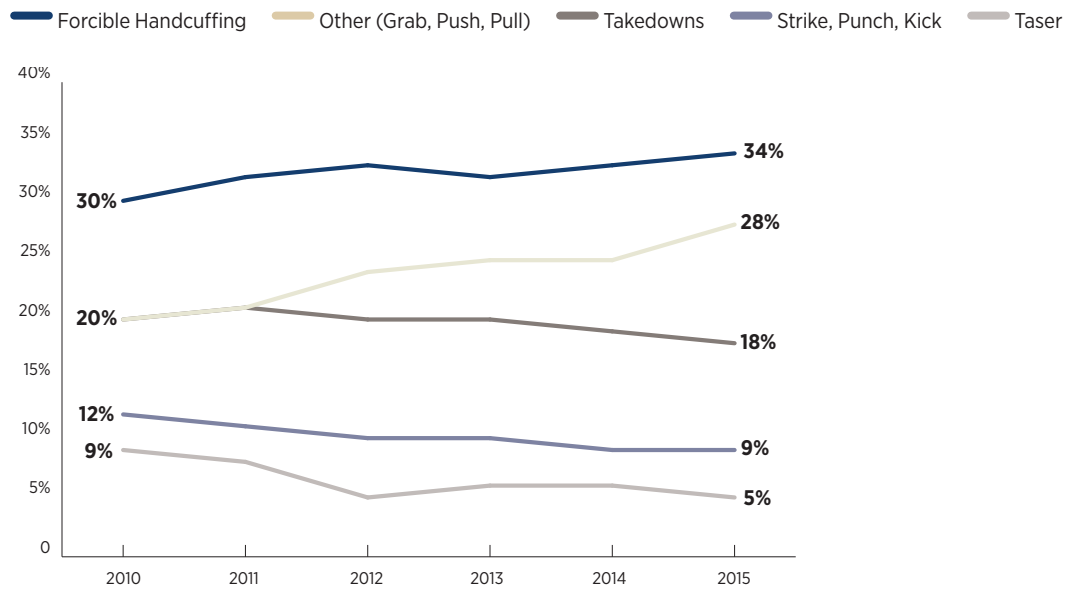
Officers choose from among a number of sanctioned control techniques when a subject resists and the SRR provides a list of 19 tactics, such as knee strike, kick, the use of a police canine and Taser. Officers select from this list and then note the order in which they applied each type of control. **The most commonly-used control techniques were forcible handcuffing (33%), “other,” which includes grabbing, pushing and pulling (24%), takedowns (20%) and the combined use of striking, punching and kicking (10%).** Discharge of a firearm, unilateral neck restraint and impact weapons were deployed much less frequently (under 1%). **Figure 10** shows the frequency of control types used from 2010 through 2015.

FIGURE 10: Control techniques used with resisting subjects, 2010 through 2015



Police have shifted the control techniques that they use, slightly, over the past five years. Officers increasingly are more likely to use forcible handcuffing and “other,” and **slightly less likely to use Tasers, or to strike, punch or kick, or use takedowns.** Figure 11 plots the percentage of SRRs for the five most common control techniques, from 2010 through 2015.

FIGURE 11: Trends in the percentage of incidents, by the most common control techniques, 2010 through 2015

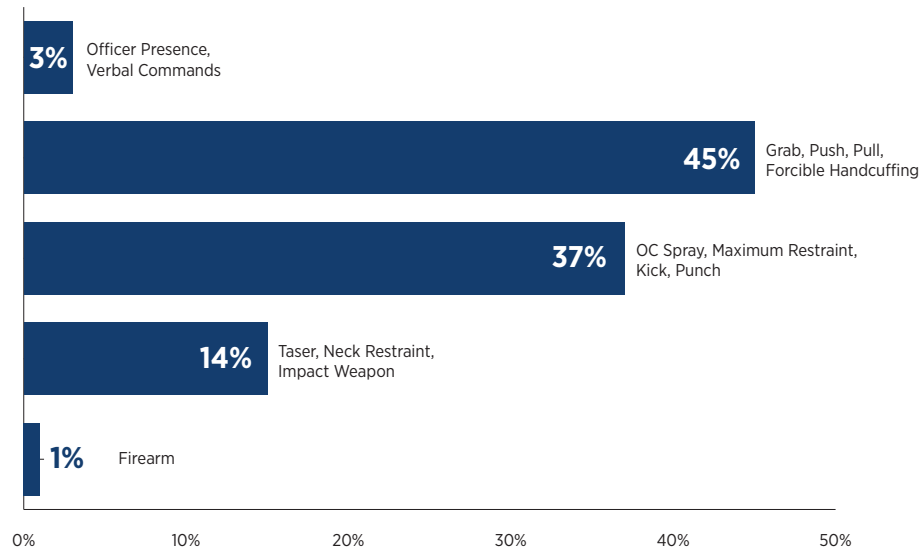


Control techniques: tiers

When police use force with a resistant subject, they often use more than one tactic. For example, an officer may use verbal commands, followed by the use of an impact weapon, and then forcible handcuffing. To study the maximum level of force used with subjects, this analysis places the control techniques into an order from least to most aggressive, grouping control techniques into five tiers. These range from officer presence and verbal commands to firearm. (Appendix C provides a complete list of control techniques by tier.)

In **nearly half of all SR incidents, officers used force on the low level of the spectrum — no more than Tier 2-level force** — which includes pulling subjects back when they pull away from an officer (a common occurrence during an arrest) and forcible handcuffing. **Figure 12** shows the percentage of total incidents by the most serious control technique used to counter SR.

FIGURE 12: SRRs by the category of the most aggressive control technique, 2010 through 2015



6. Incident outcomes

Following an SR incident, police typically assess a subject for injuries, then file any charges against the individuals involved, which they include in the SRR. This information on injuries and charges provides insight into the severity of the incidents and possible crimes by subjects associated with an encounter.

Injuries

Frequency

Injuries have declined since 2010, with a **35 percent reduction in subject injuries and a 32 percent reduction in officer injuries**. During 2015, one in three subjects was injured during a use of force encounter and one in ten officers was injured. **Figure 13** shows the share of all SR incidents resulting in injury to officers and use of force subjects by year, 2010 through 2015.

What types of injuries result from subject resistance?

Injuries most often include abrasions, taser punctures, lacerations and other punctures, chemical exposure from routine OC, taser contact stun, bumps and bruises, and animal bites. They also include swelling, concussion, gunshot wounds, fractures, sprains, and complaints of pain. **Appendix A** includes a copy of the SR report form that lists the injury codes.

FIGURE 13: Percentage of SR incidents resulting in officer or subject injury, 2010 through 2015

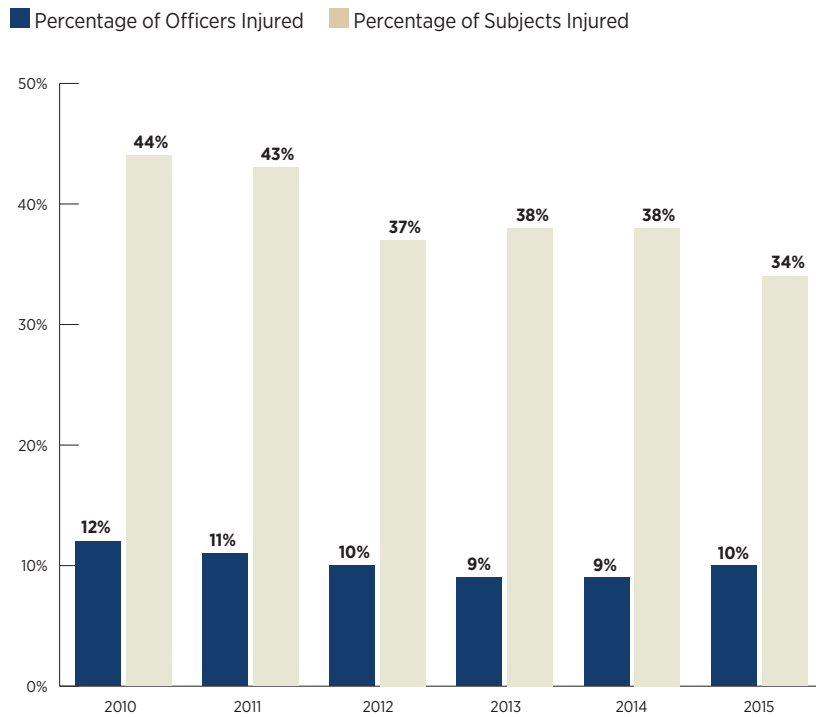


Table 5 shows the share of SR incidents that resulted in injuries to both the subject and the officer; to the subject alone; to the officer alone; or that involved no injury. Incidents that injured the officer alone are least common (occurring four to five percent of the time), while incidents that injured subject alone are far more common (29 to 37 percent of all incidents). Since 2010, the share of incidents that caused no injury increased by 10 percentage points, largely because of the decline in the share of injuries to the subject. There also was a two-percentage point decline in the share of incidents that resulted in injury to both the officer and the subject.

TABLE 5: SR injuries, 2010 through 2015

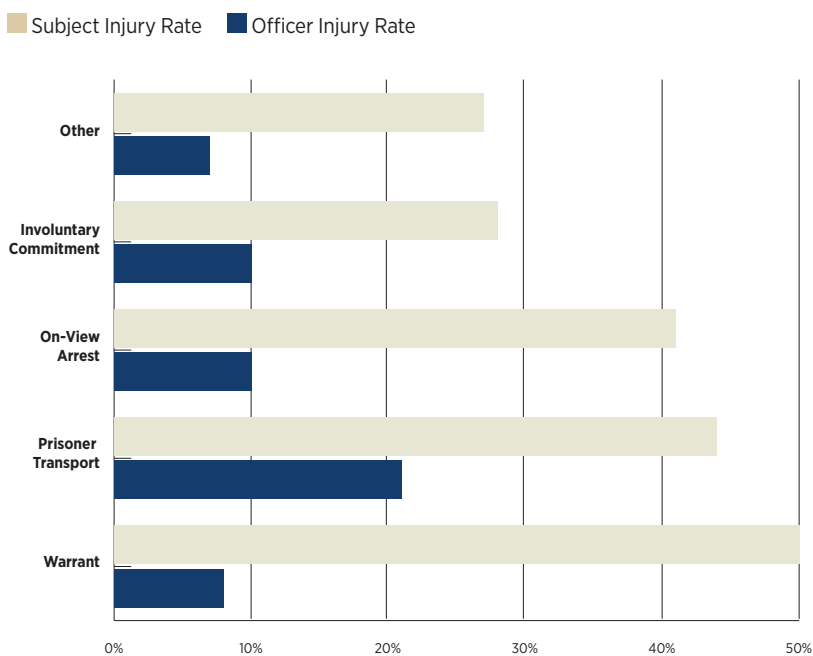
	2010	2011	2012	2013	2014	2015
No injuries during encounter	51%	52%	58%	58%	58%	61%
Subject injured, officer uninjured during encounter	37%	37%	32%	33%	33%	29%
Officer injured, subject uninjured during encounter	5%	5%	5%	4%	4%	5%
Both injured during encounter	7%	6%	6%	5%	5%	5%
(N)	1,432	1,417	1,539	1,709	1,608	1,222

Injuries by reason, tactic used and zone

Pittsburgh SRR data indicate that the likelihood of a reported injury appears to be related to the initial reason for contact between a subject and the police; the number of different control techniques used and their aggressiveness; and the location of the incident.

Reason for contact between the subject and police: From 2010 through 2015, **injury rates for police were highest (21%) if an incident occurred during prison transport**, and lowest if an incident resulted from a warrant arrest (8%) or “other” circumstance (7%). Injury rates for subjects also were high for incidents resulting from prison transport (44%), but **subject injury rates were highest during a warrant arrest (50%)**. The injury rates associated with each of the five categories of police-subject contact are shown in **Figure 14**.

FIGURE 14: Percentage of SR incidents that resulted in injury to the suspect or officer, by reason for contact, 2010 through 2015



Control tactics: As expected, injury rates also vary according to officers’ control techniques. While a control tactic itself can produce injury, the method selected by an officer can also serve as an indication of the severity of resistance, which can contribute to officer and subject injury.

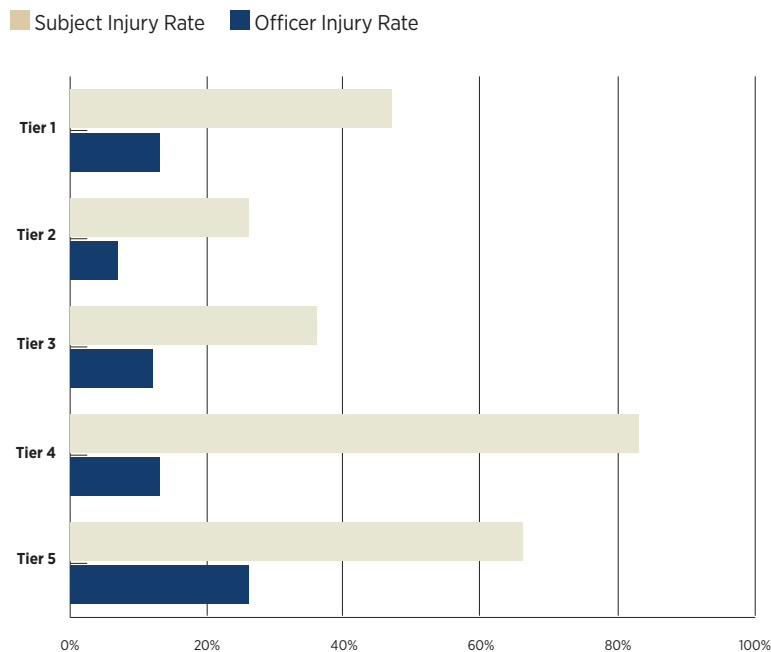
Table 6 lists the injury rates for officers and subjects by the number of control techniques used in an encounter. **Incidents that required few attempts at control were associated with lower injury rates for both officers and subjects.** For officers in particular, the use of five or more techniques to control a subject was linked to a sizeable increase in the risk of injury to both the officer and subject.

TABLE 6: Percentage of SR incidents resulting in injury to suspect or officer, by number of control techniques used, 2010 through 2015

CONTROL TECHNIQUES	OFFICER INJURY RATE	SUBJECT INJURY RATE
2 or fewer	9%	36%
3	10%	39%
4	12%	42%
5 or more	23%	53%

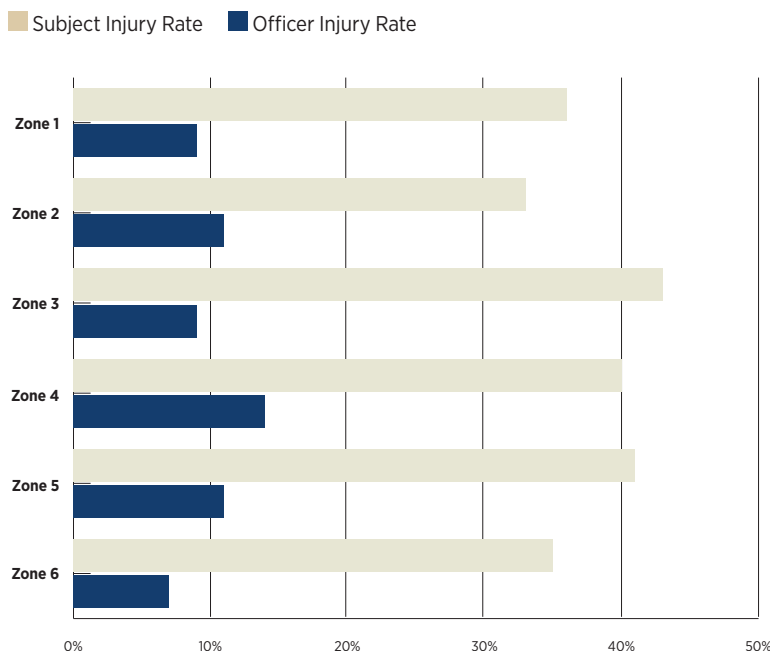
Figure 15 shows the injury rates for subjects and officers by the most aggressive control technique used during an incident. **For officers, the risk of injury increased by aggressiveness of technique** for Tiers 2 through 5. **Injury rates for subjects also increased when officers used more aggressive control techniques**, but were lower for Tier 5 incidents, which involve the use of a firearm, than they were for Tier 4 incidents, which involve Tasers, impact weapons and neck restraint. Although the use of a firearm likely signals that an encounter is high-risk, use by an officer may limit the number of additional techniques required to gain control of a resisting subject. Surprisingly, injury rates for incidents that involved only police presence or verbal commands (Tier 1) were higher than the injury rate for incidents involving Tier 2 techniques.

FIGURE 15: Percentage of SR incidents that resulted in injury to suspect or officer, by category of the most aggressive control technique used, 2010 through 2015



Location of incident: **Figure 16** shows, by zone, the injury rates for resisting subjects and officers for all use of force incidents during the study period. During this time period, officers experienced lower-than-average rates of injury in Zone 6 (where the smallest share of SR incidents occur) and in Zones 1 and 3 (where the largest share of incidents take place). For subjects, the likelihood of injury was highest if an incident took place in Zones 3, 4 or 5.

FIGURE 16: Percentage of SRs that resulted in injury to the suspect or the officer, by zone, 2010 through 2015

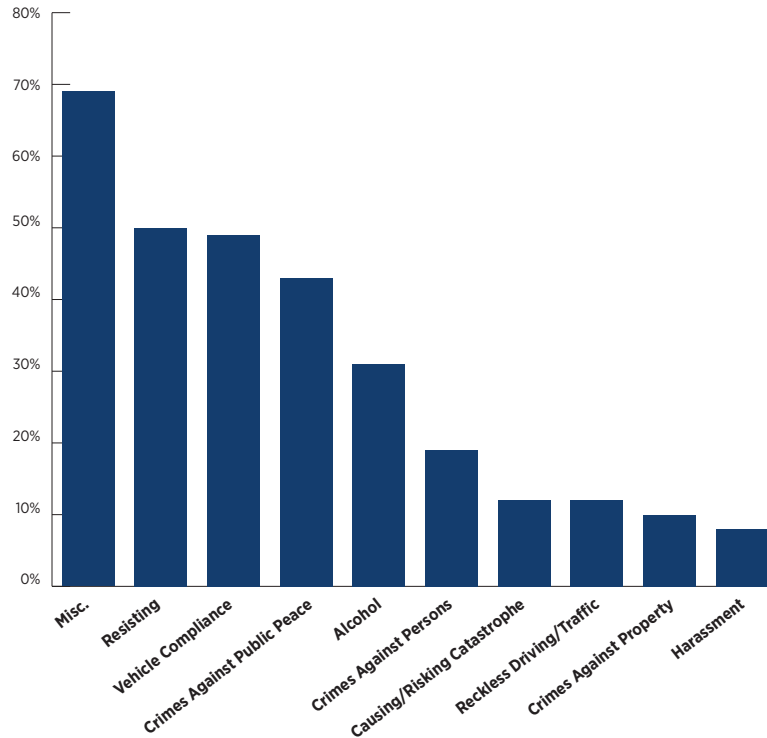


Charges

In addition to reporting on a subject’s injuries, responding officers log the charges they file in the aftermath of a use of force incident. These charges often pertain to the activities that necessitated the officer’s initial contact with the subject, such as drug possession or reckless driving, and they also include charges that relate to the subject’s act of resistance.

Figure 17 shows the most common charges filed against resisting subjects from 2010 through 2015. While police listed over 100 unique charges in SRRs, this figure consolidates charges into 15 broad categories. (**Appendix B** provides additional information on how these charges were categorized.) From 2010 through 2015, officers assigned charges to the largest number of SRR subjects in the “Miscellaneous” category, which refers to public order offenses such as public drunkenness, disorderly conduct and public urination. The second most common charge category, “Resisting,” relates to the act of resistance and includes “resisting arrest” or “fleeing or attempting to elude a police officer.” Although 50 percent of incidents resulted in a charge of resisting, nearly all of these reports included other charges as well. Since 2010, **just 28 out of 8,926 incidents resulted in only a charge of resisting.**

FIGURE 17: Percentage of subjects who received a charge from each charge category, 2010 through 2015



One SRR result, “mental health,” is different from other categories of charges because it typically results in generating a petition for an involuntary commitment. Incidents involving mental health differ from others in terms of subject demographics, the reasons for force and injuries. **Table 7** compares subjects with mental health charges to those without, showing that they are more often male and white, and that the reason for use of force is less often arrest and more often “restraint for subject’s safety” or “other.” The data show that individuals with mental health charges were less likely to be injured as a result of the encounter.

TABLE 7: Characteristics of SRRs resulting in mental health designation (N=303) compared to all other charges (N = 8,623), 2010 through 2015

		SRRS RESULTING IN MENTAL HEALTH DESIGNATION	SRRS NOT RESULTING IN MENTAL HEALTH DESIGNINATION
SEX	Female	42%	18%
	Male	58%	82%
RACE	Black	44%	59%
	White	53%	37%
	Other	3%	4%
REASON FOR FORCE	Restraint for Subject's Safety	45%	11%
	Defend Another	15%	21%
	Defend Self	17%	27%
	Effect Arrest	4%	34%
	Other	19%	7%
INJURY	Subject Injured	32%	39%
	Subject Uninjured	68%	61%
	Officer Injured	12%	10%
	Officer Uninjured	88%	90%

7. Demographics

Age

Figure 18 shows the age distribution of SRR subjects for all incidents over time. Since 2010, with the majority of SRR subjects have been young adults in the 18 to 35-year-old age range, with 41 percent of subjects age 18 through 25 and 27 percent age 26 through 35.

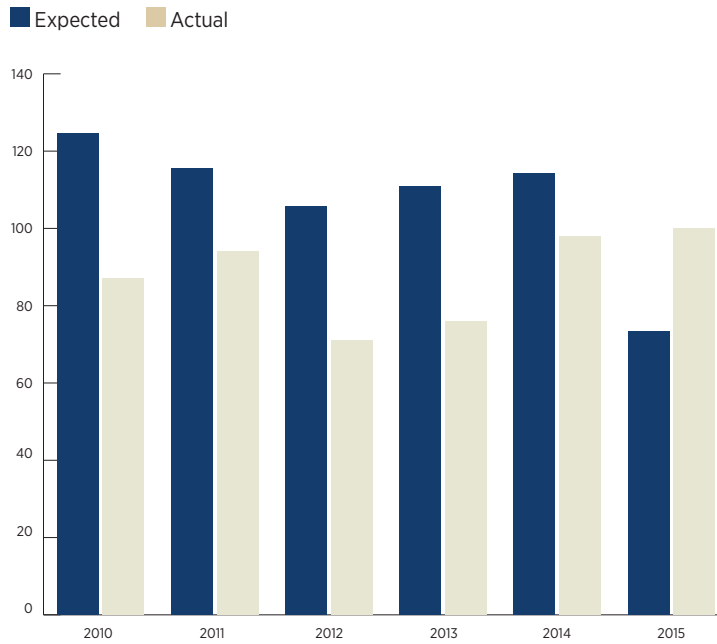
FIGURE 18: Age distribution of resistance report subjects, 2010 through 2015



⁴ Pennsylvania State Police, "Pennsylvania Uniform Crime Reporting System," <http://www.paucrs.pa.gov/UCR/Reporting/RptMain.asp>.

Figure 19 compares the actual number of juvenile SRR subjects with the number expected, given the percentage of all arrestees who are juveniles.⁴ From 2010 through 2014, the actual number of SRRs involving juveniles was lower than expected. **But early 2015 data suggest that the share of juveniles involved in SR incidents will be higher than the share arrested.**

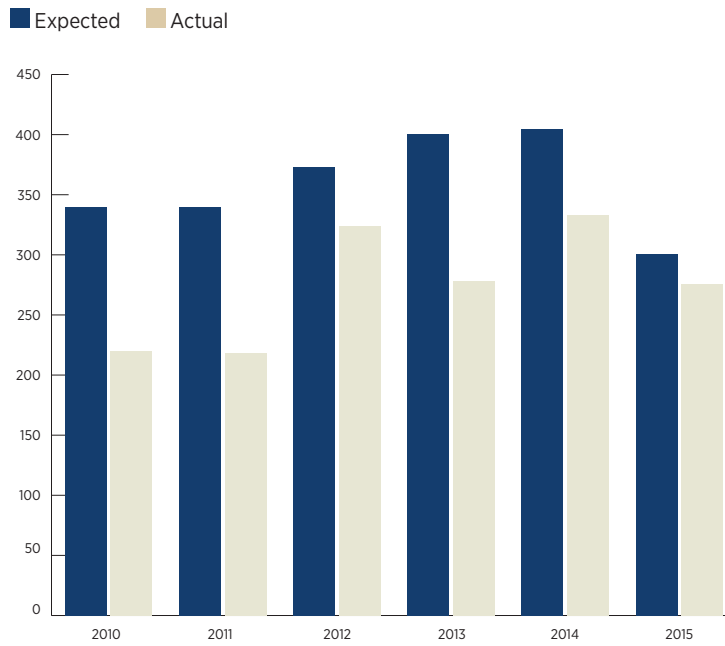
FIGURE 19: The expected number of SRR subjects who are juveniles, compared to the actual number of juvenile SRR subjects, 2010 through 2015



Female subjects

When compared with their expected number of SRRs based on their rate of arrest, **fewer females are SRR subjects than expected.** Figure 20 shows this, but also indicates that the gap between expected and actual is narrowing, with a similar proportion of female arrestees and female use of force subjects in 2014-2015.

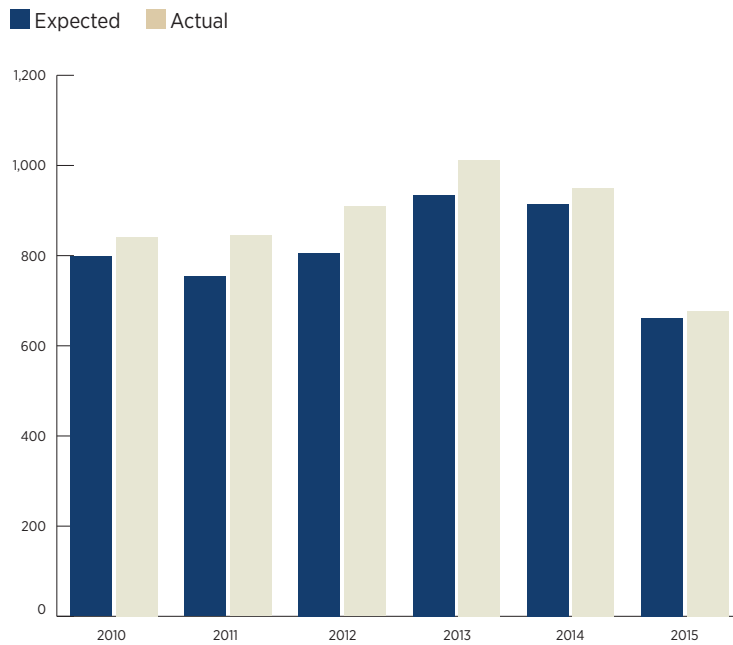
FIGURE 20: Expected number of female SRR subjects, compared to the actual number of female SRR subjects, 2010 through 2015



Race

Black men and women comprise 26 percent of the City of Pittsburgh’s population, roughly 50 percent of arrestees and 57 percent of use of force subjects. **Figure 21** examines the potential for disproportionality by showing the expected number of use of force reports for blacks, given the prevalence of black subjects in arrest record; and the actual number of SRRs in which blacks are subjects. **There are more SRRs involving blacks than expected. That difference has been shrinking over time.** In 2014–2015, the difference between expected and actual SRRs averaged 19 incidents per year.

FIGURE 21: Expected number of SRR subjects who are black, compared to the actual number of black SRR subjects, 2010 through 2015



This difference in application of force can be attributable to a number of factors, including the types of crimes that necessitated arrests for each demographic group or differences in the concentrations of police activity. For example, police often cite public order crimes as precursors to SR incidents; these crimes also are more likely to be detected (and result in an arrest) in neighborhoods where police are a concentrated presence because of data-driven deployment focused on reducing violent crime (based on the volume of calls from residents for police service and incidents of violence).

To better examine the potential for racial disproportionality, it is possible to isolate the share of all disproportionality that can be explained by differences in arrests. Comparing the actual versus expected numbers of black and non-black SR subjects — after removing the differences to be expected based on arrest patterns — provides the “share of disproportionality unexplained by arrest.”⁵ **Table 8** provides this measure for each year from 2010 through 2015, as well as the total number of reported incidents.⁶

TABLE 8: The share of racial disproportionality in SR incidents unexplained by disproportionality in arrests, 2010 – 2015

	2010	2011	2012	2013	2014	2015
Share of disproportionality unexplained by arrest	20%	28%	31%	21%	17%	10%
Total SR Incidents	1,432	1,417	1,539	1,708	1,608	1,436*

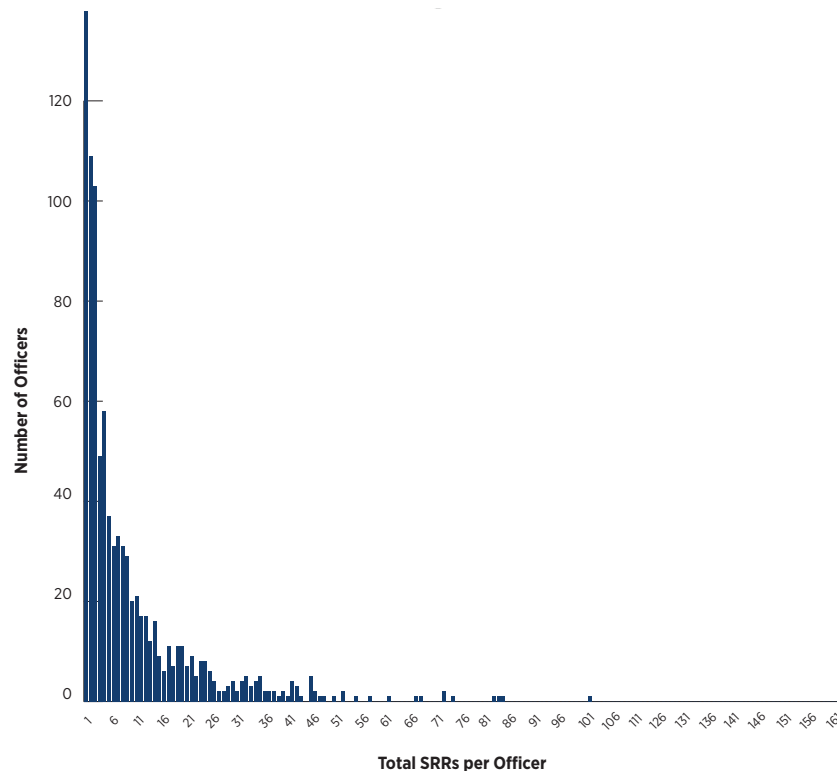
*Projected

8. Officers who encounter subject resistance

Of the City of Pittsburgh’s approximately 900 police personnel, data indicate that 762 officers were involved in a use of force incident from 2010 through 2015. Of those who engaged a resisting subject, **most reported between one and five total incidents during that time period.**

A smaller share of officers, however, was involved in a large number of SR incidents. For example, **120 officers reported using force more than 25 times.** Figure 23 shows the number of officers who engaged in SR incidents by the total number of incidents they reported in 2010 through 2015.

FIGURE 23: Number of officers who engaged in one or more SR incidents, by their total incidents, 2010 through 2015



A call to re-engineer training & policy

In May 2015, the Police Executive Research Forum (PERF) convened nearly 300 police chiefs and law enforcement officials, researchers and government officials to discuss training in use of force. They recommended that police agencies dramatically change their training and that they review their policies on use of force, “which rely on outdated concepts of use-of-force, including the use-of-force ‘continuum,’ in which levels of resistance from a suspect are matched with specific police tactics and weapons. In the past, this was considered an effective way to provide officers with specific guidance about how to handle various situations. However, there is an increasing understanding that use of force cannot be measured in such a mechanical way. Rather, officers must be trained to evaluate the entire situation they are facing, and to make good decisions about the wide range of options that may be available to them, depending on the circumstances.” (PERF 2015)

Some characteristics of an incident, such as officer injuries, appear to vary depending on an officer’s total number of SRRs. **Table 10** lists these outcomes for officers with five or fewer incidents and for those who have reported 10 or more. **Officers who employ force more frequently tend to experience lower rates of injury themselves but are more likely to injure a subject.** These officers also file a greater number of charges per incident, with an average of 4.14 charges per SRR compared to 3.53 charges per SRR for officers with fewer reports. While high and low SRR officers assign vehicle compliance and alcohol charges at roughly equal rates, **officers who engage in force more often are most likely to charge a subject with resisting arrest or a crime against persons.**

TABLE 10: Incident outcomes for officers who reported SR incidents frequently and infrequently, 2010 through 2015

	LESS THAN OR EQUAL TO FIVE SRRS	GREATER THAN OR EQUAL TO 10 SRRS
Subject Injury Rate	33%	40%
Officer Injury Rate	14%	9%
Average charges per incident	3.53	4.14
Vehicle Compliance	49%	48%
Alcohol Offenses	29%	32%
Crimes Against Public Peace	36%	40%
Resisting	40%	47%
Crimes Against Persons	14%	20%

Some of the variation in officers' SRR totals, observed in **Figure 23**, may be attributable to differences in the nature of police activity in each zone and assignment. The data show that, overall, officers who work in higher crime areas filed a greater number of SRRs than officers who worked in areas with less crime. Excluding the K-9 divisions, officers who were assigned to Narcotics/Vice have the highest median number of SRRs, at six per officer, which may be due to the frequency with which people who deal in drugs pull away from officers during the arrest process. Officers are more likely to need to pull them or force their hands behind their backs (low tier uses of force) and report these incidents to their supervisors, as required by the PBP. Several officers within these zones and assignments eclipsed the SRR median for their peers.

9. Action steps

Examining SRR data allows for a clearer understanding of the nature of use of force and its trends over time. This analysis finds that PBP officers use force less often today than in recent years, but use of force is part of a greater share of all arrests. The level of aggressiveness of force and the outcomes of SR incidents differ according to antecedents of the event, subject demographics and differences in how frequently officers apply force when they encounter SR.

The analysis presented in this report has implications for police training, incident monitoring and community engagement. When police can better anticipate instances of SR and predict outcomes, they are better able to prevent resistance, de-escalate it and, when necessary, deploy force that leads to minimal harm to subjects or themselves while maintaining public safety.

The PBP has identified a number of action steps. The Bureau will:

- Present this report to supervisors and discuss the unexplained racial disproportionality that it identifies, whether the Bureau's current training in procedural justice and implicit bias will address the issue and, if it does not, what other strategies it can employ.
- Revamp its policies, training and communications to align with the fundamental role of police as problem-solvers who work with citizens to prevent crime and in accordance with the highest standards for policing. These actions, several of which are underway, include:
 - Use of force policy changes and complementary training
 - Implementation of quality assurance processes, including spot checks, to ensure that every use-of-force incident is promptly and accurately reported
 - Implicit bias training
 - Procedural justice training
 - Crisis Intervention training
 - Leadership training for all in the Bureau
- Make use of force an element of the officer accountability system that the PBP is building; and use this system to quickly respond when an officer violates the Bureau's policies on use of force.

- Conduct case reviews on critical issues or emerging issues (e.g., an increase in SRRs for a subpopulation, such as juveniles) in order to understand what may be changing and how the Bureau can prevent/respond to the issues.
- Routinely review use of force data with supervisors so that they can use the information for management purposes, to identify problems in their zones and to identify questions that they need to answer from the SRR data.
- Continue to collect SRR data, publicly reporting this information and soliciting questions along other lines of inquiry.

10. Areas of inquiry

This report raises a number of questions for future inquiry, using statistical analysis and also qualitative strategies such as officer interviews. These questions include:

- What are the dispositions of the charges for use of force cases and how do they compare with the dispositions of cases (with the same charges) in which force was not used?
- What has happened with juvenile-related crime over the past five years? Have there been changes in the types of juvenile crime and the characteristics of juvenile crime?
- Are there tactics and weapons used more frequently by police in some zones than others?
- Why would the reports of resistance differ for one race or subgroup, for a particular type of crime such as reckless driving or alcohol offense? Are these differences in the degree of resistance by the subjects and/or differences in how police respond at the earliest sign of resistance?
- Is the rate of disproportionality different when the analysis compares SRRs to “expected” rates based not only on arrest but also on the race/age/gender of suspects and victims?
- What is SRR as a share of other measures of contact with citizens, including traffic stops and field interviews (in addition to calls for service)?

ENDNOTES

Alfred Blumstein, "On the Racial Disproportionality of United States' Prison Populations," Journal of Criminal Law and Criminology, 1982.

National Institute of Justice, "Police Use of Force," <http://nij.gov/topics/law-enforcement/officer-safety/use-of-force/pages/welcome.aspx>

William Terrill, Eugene Paoline, and Jason Ingram, "Final Technical Report Draft: Assessing Use of Force Policy and Outcomes, NCJ report number 237794, 2011.


Pittsburgh Bureau of Police memo on Use of Force, Order number 12-6, January 3, 2005.

Police Executive Research Forum, "Critical Issues in Policing Series: Re-engineering Training on Police Use of Force, August 2015.

Michael Smith, Robert Kaminski, Geoffrey Alpert, GP, Lorie Fridell, John MacDonald, and Bruce Kubu, "Multi-Method Evaluation of Police Use of Force Outcomes: Final Report to National Institute of Justice. NCJ Number 231176, 2009.

Vera Institute of Justice, "Turning Necessity Into Virtue: Pittsburgh's Experience with a Federal Consent Decree," http://www.vera.org/sites/default/files/resources/downloads/Pittsburgh_consent_decree.pdf

APPENDIX A: SUBJECT RESISTANCE REPORT

	CITY OF PITTSBURGH BUREAU OF POLICE SUBJECT RESISTANCE REPORT	1 YEAR	2 CCR#
		PAGE 1 OF 3	
<p>In compliance with the Pittsburgh Bureau of Police Use of Force Policy, this Subject Resistance Report Form <i>must</i> be completed for any use of force with the exception of the following circumstances:</p> <p style="margin-left: 40px;">(1) Mere presence of police officers or canines (2) Verbal commands (3) *Handcuffing with no or minimal resistance when restraining or transporting (4) *Come-along holds (5) *Physical removal of peacefully resisting demonstrators (6) Displaying or un-holstering of a firearm or TASER</p> <p style="text-align: center; font-size: small;">(*A Subject Resistance Report Form must be completed where the use of such force results in injury to the subject requiring medical treatment before acceptance into a detention facility.)</p>			
4 INCIDENT INFORMATION			
NAME OF OFFICER AND I.D. NUMBER 5		ZONE / DIVISION 6	VEHICLE / ASSIGNMENT 7
LOCATION OF OCCURRENCE (INCLUDE APT. # OR BUILDING NAME, IF APPLICABLE) 8			CENSUS 9 ZONE 10
DATE / TIME OF OCCURRENCE 11 Hrs.		DATE / TIME OF REPORT 12 Hrs.	
13 SUBJECT INFORMATION			
NAME OF RESISTING SUBJECT (Last, First Mi) 14		DOB 15	SEX 16
		RACE 17	PHONE NUMBER 18 OTHER PHONE 19
INCIDENT TYPE <input type="checkbox"/> ON VIEW ARREST 20 <input type="checkbox"/> INVOLUNTARY COMMITMENT <input type="checkbox"/> WARRANT ARREST <input type="checkbox"/> OTHER: <input type="checkbox"/> PRISONER TRANSPORT		IF OTHER, EXPLAIN 21	
INITIAL CHARGE(S) AGAINST SUBJECT 22			
23 TYPE OF RESISTANCE AND CONTROL USED			
INITIAL REASON FOR USE OF FORCE (Check all that apply)		IF OTHER, EXPLAIN	
<input type="checkbox"/> TO DEFEND SELF <input type="checkbox"/> TO DEFEND ANOTHER 24 <input type="checkbox"/> EFFECTING ARREST <input type="checkbox"/> RESTRAIN FOR SUBJECT'S SAFETY <input type="checkbox"/> OTHER:		25	
SUBJECT RESISTED BY (Indicate by numbering 1, 2, 3... the order in which the subject resisted)			
_____ BODY LANGUAGE		26	
_____ VERBAL NON-COMPLIANCE		_____ ASSAULTIVE BEHAVIOR (Physical attempt to cause bodily harm to officer or another)	
_____ ACTIVE RESISTANCE (Physical, affirmative actions to prevent officer control; No attempt to harm officer)		_____ DEADLY FORCE (Resistance likely to cause serious bodily harm to officer or another)	
LEVEL OF CONTROL USED (Indicate escalation by numbering 1, 2, 3... the order in which each tactic was used)			
_____ 1 OFFICER PRESENCE	_____ O.D.E. TECHNIQUE (To retrieve narcotics)	_____ FORCIBLE HANDCUFFING	_____ USE OF VEHICLE
_____ VERBAL COMMANDS	_____ ELBOW STRIKE	_____ MAXIMAL RESTRAINT (Cuffing feet and hands)	_____ POLICE CANINES
_____ PALM STRIKE	_____ KNEE STRIKE	_____ OC SPRAY	_____ ROAD SPIKES
_____ PUNCH	_____ KICK	_____ TASER	_____ INTENTIONAL DISCHARGE OF FIREARM
_____ UNILATERAL NECK RESTRAINT	_____ TAKE DOWN (Describe below)	_____ IMPACT WEAPON (Describe below)	_____ OTHER (Describe below)
DESCRIBE TAKE DOWN 28		DESCRIBE IMPACT WEAPON 29	DESCRIBE OTHER 30

Appendix A
(continued)

CITY OF PITTSBURGH BUREAU OF POLICE SUBJECT RESISTANCE REPORT		31 YEAR	32 CCR#				
NAME OF OFFICER AND I.D. NUMBER 34		ZONE / DIVISION 35	PAGE 2 OF 33 VEHICLE / ASSIGNMENT 36				
INJURY CODE TABLES							
Use the following Code Tables to record Injury Data in the next section. For blocks that are not applicable, enter "00". For multiple injuries to either the officer or subject, complete Sections D & E for each injury.							
(A) PERSON TREATED O – OFFICER S – SUBJECT	(D) REASON FOR TREATMENT		(E) AREA OF INJURY				
(B) TREATMENT RECEIVED 00 – NONE 01 – SELF TREATMENT / EMS 02 – TREATED / RELEASED 03 – TREATED / ADMITTED 04 – TREATMENT REFUSED	00 – NO TREATMENT / INJURY 01 – INTOXICATION 02 – INVOLUNTARY COMMITMENT 03 – CHEMICAL EXPOSURE (Routine OC) 04 – CHEMICAL EXPOSURE (Non – Routine OC) 05 – CHEMICAL EXPOSURE (Other – Describe below) 06 – BIOLOGICAL EXPOSURE (Blood) 07 – COMPLAINT OF PAIN (Explain in narrative) 08 – SWELLING 09 – BUMPS / BRUISES 10 – ABRASIONS		00 – NO INJURY 01 – HEAD 02 – FACE 03 – EYES (OC Exposure) 04 – EYES (Non – OC Exposure) 05 – EARS(S) 06 – NOSE 07 – MOUTH 08 – JAW 09 – NECK 10 – BACK 11 – ARM(S) 12 – HANDS / WRISTS 13 – LEG(S) 14 – CHEST / STOMACH 15 – INTERNAL 99 – OTHER AREA (Describe below)				
(C) HOW INJURY SUSTAINED 00 – NO INJURY 01 – RESULTED FROM POLICE ENCOUNTER 02 – INJURED PRIOR TO POLICE ENCOUNTER 03 – SELF-INFLICTED	11 – SPRAINS / STRAINS 12 – FRACTURES 13 – DISLOCATIONS 14 – OPEN WOUND (Laceration, Puncture, etc.) 15 – GUNSHOT WOUND 16 – BITE – ANIMAL 17 – BITE – HUMAN 18 – CONCUSSION 19 – TASER PUNCTURE 20 – TASER – CONTACT STUN 99 – OTHER INJURY (Describe below)						
37 INJURY DATA							
NAME OF PERSON (Last, First Mi)	(A) PERSON TREATED	(B) TREATMENT RECEIVED	(C) HOW INJURED?	(D) TREATMENT REASON	(E) INJURY AREA	ATTENDING PHYSICIAN	HOSPITAL
38	39	40	41	42	43	44	45
DESCRIBE CHEMICAL EXPOSURE:		46					
DESCRIBE OTHER INJURY:		47					
DESCRIBE OTHER AREA:		48					
49 WITNESSES							
WITNESS NAME (Last, First Mi)	ADDRESS			PHONE NUMBER	OTHER PHONE		
50	51			52	53		
54 SUPERVISORY REVIEW / APPROVAL							
SHIFT SERGEANT REMARKS 55							
SHIFT SERGEANT SIGNATURE 56		TYPE / PRINT NAME OF SHIFT SERGEANT 57		ASSIGNED NUMBER 58	DATE 59		
SHIFT LIEUTENANT REMARKS 60							
SHIFT LIEUTENANT SIGNATURE 61		TYPE / PRINT NAME OF SHIFT LIEUTENANT 62		ASSIGNED NUMBER 63	DATE 64		
I have reviewed the information contained herein, and have determined that the amount of force used in this incident: 65 <input type="checkbox"/> DOES NOT APPEAR TO BE EXCESSIVE <input type="checkbox"/> OMI INVESTIGATION REQUESTED <input type="checkbox"/> HOMICIDE INVESTIGATION REQUESTED							
COMMANDER SIGNATURE 66		ASSIGNED NUMBER 67	DATE OF INITIAL REVIEW 68	DATE OF FINAL APPROVAL 69			

APPENDIX B: CODES

CODE	TITLE	CATEGORY
1332	Registration and Certificate of Title Required	Vehicle Compliance, Registration, Driver Licensing
1371	Display of Registration Plate	Vehicle Compliance, Registration, Driver Licensing
1501	Operation Following Suspension of Registration	Vehicle Compliance, Registration, Driver Licensing
1515	Drivers Required to be Licensed	Vehicle Compliance, Registration, Driver Licensing
1543	Notice of Change of Name or Address	Vehicle Compliance, Registration, Driver Licensing
1786	Driving While Operating Privilege is Suspended or Revoked	Vehicle Compliance, Registration, Driver Licensing
2701	Required Financial Responsibility	Vehicle Compliance, Registration, Driver Licensing
2702	General Lighting Requirements	Vehicle Compliance, Registration, Driver Licensing
2703.1	Operation of Vehicle without Official Certif. of Inspection	Vehicle Compliance, Registration, Driver Licensing
2705	Prohib. on Expend. for Emission Insp Prog	Vehicle Compliance, Registration, Driver Licensing
2709	Terroristic Threats	Terroristic Threats
3502	Recklessly Endangering Another Person	Recklessly Endangering Another Person
3111	Careless Driving	Reckless or Careless Driving
3112	Obedience to Traffic-Control Devices	Reckless or Careless Driving
3127	Traffic-Control Signals	Reckless or Careless Driving
3301	Driving on Right Side of Roadway	Reckless or Careless Driving
3301	One-Way Roadways and Rotary Traffic Islands.	Reckless or Careless Driving
3302	Stop Signs and Yield Signs	Reckless or Careless Driving
3304	Turning Movements and Required Signals.	Reckless or Careless Driving
3308	Stop, Stand and Park Outside Bus. and Res.	Reckless or Careless Driving
3323	Driving Vehicle at Safe Speed	Reckless or Careless Driving
3334	Reckless Driving	Reckless or Careless Driving
3351	Accidents Involving Death or Personal Injury	Reckless or Careless Driving
3361	Accidents Involving Damage to Unattended Veh.or Prop	Reckless or Careless Driving
5126	Interference with Official Duties	Obstructing, Resisting, Evading, Deceiving Police
5501	Fleeing or Attempting to Elude Police Officer	Obstructing, Resisting, Evading, Deceiving Police
5502	Tampering with or Fabricating Physical Evidence	Obstructing, Resisting, Evading, Deceiving Police
5503	False Identification to Law Enforcement Authorities	Obstructing, Resisting, Evading, Deceiving Police
5505	Intimidation of Witnesses or Victims	Obstructing, Resisting, Evading, Deceiving Police

Appendix B

(continued)

CODE	TITLE	CATEGORY
5506	Obstructing Admin. of Law	Obstructing, Resisting, Evading, Deceiving Police
5507	Resisting arrest	Obstructing, Resisting, Evading, Deceiving Police
5901	Disarming a Law Enforcement Officer	Obstructing, Resisting, Evading, Deceiving Police
5902	Hindering Apprehension or Prosecution	Obstructing, Resisting, Evading, Deceiving Police
6105	Obstructing Emergency Services	Obstructing, Resisting, Evading, Deceiving Police
6106	Escape	Obstructing, Resisting, Evading, Deceiving Police
6110.1	Flight to Avoid Apprehension, Trial or Punishment	Obstructing, Resisting, Evading, Deceiving Police
5104	Reselling of tickets at Heinz Field or PNC Park	Miscellaneous Offenses
5104.1	Criminal Solicitation	Miscellaneous Offenses
5105	Criminal Conspiracy	Miscellaneous Offenses
5112	Indirect Criminal Contempt	Miscellaneous Offenses
5121	Aided Case	Miscellaneous Offenses
5123	(Misc. Incident)	Miscellaneous Offenses
9093	Bench Warrant	Miscellaneous Offenses
3701	Spitting	Miscellaneous Offenses
3702	Public Urination And Defecation	Miscellaneous Offenses
3714	Panhandling	Miscellaneous Offenses
3736	Riot	Miscellaneous Offenses
3742	Failure of Disorderly Persons to Disperse	Miscellaneous Offenses
3745	Disorderly Conduct	Miscellaneous Offenses
3802	Public Drunkenness	Miscellaneous Offenses
3809	Loitering and Prowling at Night	Miscellaneous Offenses
3921	Obstructing highways and other public passages	Miscellaneous Offenses
3929	Scattering Rubbish	Miscellaneous Offenses
6310	(Mental)	Mental Health
2706	Aggravated Harassment by Prisoner	Harassment
2711	Harassment	Harassment
601.12	Prohibited Offensive Weapons	Firearms
601.16	Former Convict not to Own a Firearm, Etc.	Firearms
602.04	Firearms not to be Carried without a License	Firearms
726.03	Possession of Firearm by Minor	Firearms
6501	DUI	DUI
601.1	Possessing Instruments of Crime	Drug Offenses
6307	Contraband	Drug Offenses
6308	Controlled substance	Drug Offenses
2902	Prostitution and related offenses	Crimes Against Public Peace

Appendix B

(continued)

CODE	TITLE	CATEGORY
4304	Criminal Mischief	Crimes Against Public Peace
4706	Criminal Trespass	Crimes Against Public Peace
4303	Arson	Crimes Against Property
4703	Burglary	Crimes Against Property
4914	Theft by unlawful taking or disposition.	Crimes Against Property
4952	Receiving Stolen Property	Crimes Against Property
5101	Retail Theft	Crimes Against Property
4910	Robbery of Motor Vehicle	Crimes Against Persons
902	Simple Assault	Crimes Against Persons
903	Aggravated Assault	Crimes Against Persons
907	Domestic Violence	Crimes Against Persons
908	Unlawful Restraint	Crimes Against Persons
1301	Robbery	Crimes Against Persons
3733	Indecent Exposure	Crimes Against Persons
3925	Open Lewdness	Crimes Against Persons
7513	Endangering Welfare of Children	Child Welfare
3503	Causing/Risking Catastrophe	Causing/Risking Catastrophe
9497	Restriction on Alcoholic Beverages in Vehicle	Alcohol Offenses
9501	Misrep. of Age to Secure Liquor	Alcohol Offenses
13(a)	Purchase, consumption, possession or transportation of liquor or malt or brewed beverages.	Alcohol Offenses
9498 302	Inducement of Minors to Buy Liquor or Malt or Brewed Beverages	Alcohol Offenses
9999	Restriction on Alcoholic Beverages —	Alcohol Offenses
9999	Open Container	Alcohol Offenses

APPENDIX C: TIERS

TIER 1	TIER 2	TIER 3	TIER 4	TIER 5
• Officer Presence	• ODET	• OC Spray	• Neck Restraint	• Firearm
• Verbal Commands	• Other (Grab, Push, Pull)	• Takedown	• Impact Weapon	
	• Forcible Handcuffing	• Maximal Restraint	• Police Canines	
		• Kick, Punch, Strike	• Taser	

APPENDIX D: CALCULATION FOR FORMS OF RESISTANCE

Subject resistance categories in order of increasing severity:

1. Verbal Non-compliance
2. Body Language
3. Active Resistance
4. Assaultive Behavior
5. Deadly Force

Method for weighting resistance:

Each form of resistance is weighted according to its presumed contribution to police perception of risk and resulting use of force decisions. For any one incident, the reporting officer may cite multiple forms of resistance, yet these forms of resistance do not contribute equally to the officer’s decision to use force. When subjects employ more than one form of resistance, we assume that more serious forms of resistance have a greater impact on an officer’s perception of risk than less serious forms of resistance.

Weights

FORMS OF RESISTANCE	LEAST SERIOUS				MOST SERIOUS
1	1.000				
2	0.330	0.670			
3	0.143	0.285	0.570		
4	0.067	0.133	0.266	0.532	
5	0.032	0.065	0.129	0.258	0.516

Example:

Not weighted

VNC	BL	AR	AB	DF
1	0	1	1	0

Weighted

VNC	BL	AR	AB	DF
0.1425	0	0.285	0.57	0

APPENDIX E: CALCULATING RACIAL DISPROPORTIONALITY IN SRRS

Dr. Alfred Blumstein developed a formula for determining how much of the racial disproportionality seen in prisons could be attributable to the rates at which racial groups were being arrested and how much might be attributed to racial discrimination.⁷ His journal article explained the formula in this way:

“In order to indicate the fraction of the racial disproportionality in prison that is accounted for by the disproportionate representation in arrests, the following ratio may be formulated:

$$X = \frac{\text{ratio of expected black-to-white incarceration rates based only on arrest disproportionality}}{\text{ratio of black-to-white incarceration rates actually observed}}$$

If all prison disproportionality were accounted for by the differential arrest involvement, X would be 1.0” (Blumstein, 1982). If the ratio is less than 1.0, then that would mean a share of the disproportionality may be attributed to discrimination. (For example, if there were 1000 arrests and half of those arrests were for black subjects and half were for white subjects, then we would expect that half of the SR reports would be for black subjects and half for white subjects.)

Dr. Blumstein’s formula provides a logical approach for examining racial disproportionality in SRRs since one can isolate how much of the disproportionality in use of force is due to a higher frequency of arrests of black people and, for the share that is not explained by arrests, can point to the possible presence of racial discrimination.

Applying this formula for each of the years studied shows that most of the racial disproportionality in use-of-force reports by the PBP is due to the fact that a greater share of black people are arrested (e.g., 80% in 2010 and 72% in 2011). Still, in each of the years studied, some share is not explained by arrest (20% in 2010 and 28% in 2011), which indicates potential discrimination.

We simplified this calculation by only using arrests and use-of-force reports for black and white people. As a detailed example of how these ratios were calculated, we applied the 2013 data (shown in the table below) to this formula:

$$X = \frac{\text{ratio of expected black-to-white SRR rates based only on arrest disproportionality}}{\text{ratio of black-to-white SRR rates actually observed}}$$

- a) Total number of arrests = 17,869
- b) Number and percent of those arrests, where subject is black = 9,783 (55%)
- c) Number and percent of those arrests, where subject is white = 7,968 (45%)
- d) Total number of SR reports = 1708
- e) Expected number of SR reports (given arrest patterns) where subject is black = 55% of 1708, or **939**
- f) Expected number of SR reports (given arrest patterns) where subject is white = 45% of 1708, or **769**

⁷ This same approach has been applied to the calculation of incidents unexplained by arrests by age and gender.

- g) Actual number of SR reports where subject is black = **1012**
- h) Actual number of SR reports where subject is white = **652**

i) 939 expected number of SRR where subject is black/769 expected number of SRR where subject is white= 1.22

$$X = \frac{\text{g)}}{\text{h)}} = \frac{1012}{652} = 1.55$$

j) 1012 actual number of SRR where subject is black/652 actual number of SRR where subject is white = 1.55

$$X = \frac{\text{i)}}{\text{j)}} = \frac{1.22}{1.55} = 0.787$$

j) 1.55

k) X= 0.787 or 79%

Therefore, 79% of the racial disproportionality in 2013 can be explained by arrest disproportionality. The remaining 21% is not explained by arrest differences by race.

	2010	2011	2012	2013	2014	2015
(a) Total number of arrests	15,161	15,898	17,140	17,869	15,406	7,861
(b) Percentage of total arrests, where person is black	56%	53%	52%	55%	57%	54%
(c) Percentage of total arrests, where person is white	44%	46%	47%	45%	43%	45%
(d) Total Subject Resistance Reports	1432	1417	1539	1708	1608	1222
(e) Expected number of SR reports (given arrest patterns) where subject is black	802	751	800	939	917	660
(f) Expected number of SR reports (given arrest patterns) where subject is white	630	652	723	769	691	550
(g) Actual number of SRRs where subject is black	842	845	909	1012	950	677
(h) Actual number of SRRs where subject is white	528	528	565	652	594	513
(i) Ratio of expected black-to-white SRR rates based only on arrest disproportionality	1.27	1.15	1.11	1.22	1.33	1.20
(j) Ratio of black-to-white SRR rates actually observed	1.59	1.60	1.61	1.55	1.60	1.32
(k) Disproportionality explained by arrest	80%	72%	69%	79%	83%	91%

