



BPD Use of Force and Response to Resistance  
Analysis  
1/25/17

# Definitions



Police Use of Force:

“The amount of effort required by police to compel compliance by an unwilling subject” -IACA

BPD Policy (threshold for writing a report):

Any action other than compliant hand-cuffing that an officer is required to use to:

- 1) arrest an individual suspected of committing a crime
- 2) temporarily detain an individual to complete an investigation
- 3) address an immediate threat to the safety of the public , law enforcement officers, or the person of interest

as a result of non-compliance

In determining whether a particular response to resistance (use of force option) is objectively reasonable the officer must consider;

- 1) the seriousness of the offense the officer suspects when the force option is employed;
- 2) whether or not the subject poses an immediate physical threat to the officer or others and the degree of that threat
- 3) whether the subject is actively resisting or attempting to evade arrest by flight;
- 4) whether the totality of the circumstances justify the officer’s response

International Association of Chiefs of Police. *Police Use of Force in America 2001.*



# Definitions (analytical)

<b>Term</b>	<b>Definition</b>
<b>Use of Force Event</b>	Use of force occurrence in a single time and location which could include multiple officers and suspects (determined by unique "Incident Number")
<b>Use of Force Interaction</b>	Any unique suspect vs officer contact involving an officer use of force. Multiple Use of Force Interactions can make up a single Use of Force Event.
<b>Use of Force Iteration</b>	Any individual action an officer takes against a suspect within a unique Use of Force Incident
<b>Suspect Resistance Iteration</b>	Any individual act of resistance a suspect takes against an officer within a unique Use of Force Incident

# Analysis: Scope of UOF in Burlington



From 07/01/2010 to 10/31/2016:

1,681 UOF events

2,819 unique UOF interactions

6,936 UOF iterations

\*1,988 suspects

This means:

1.2 suspects per event

1.7 unique police-suspect interactions per event

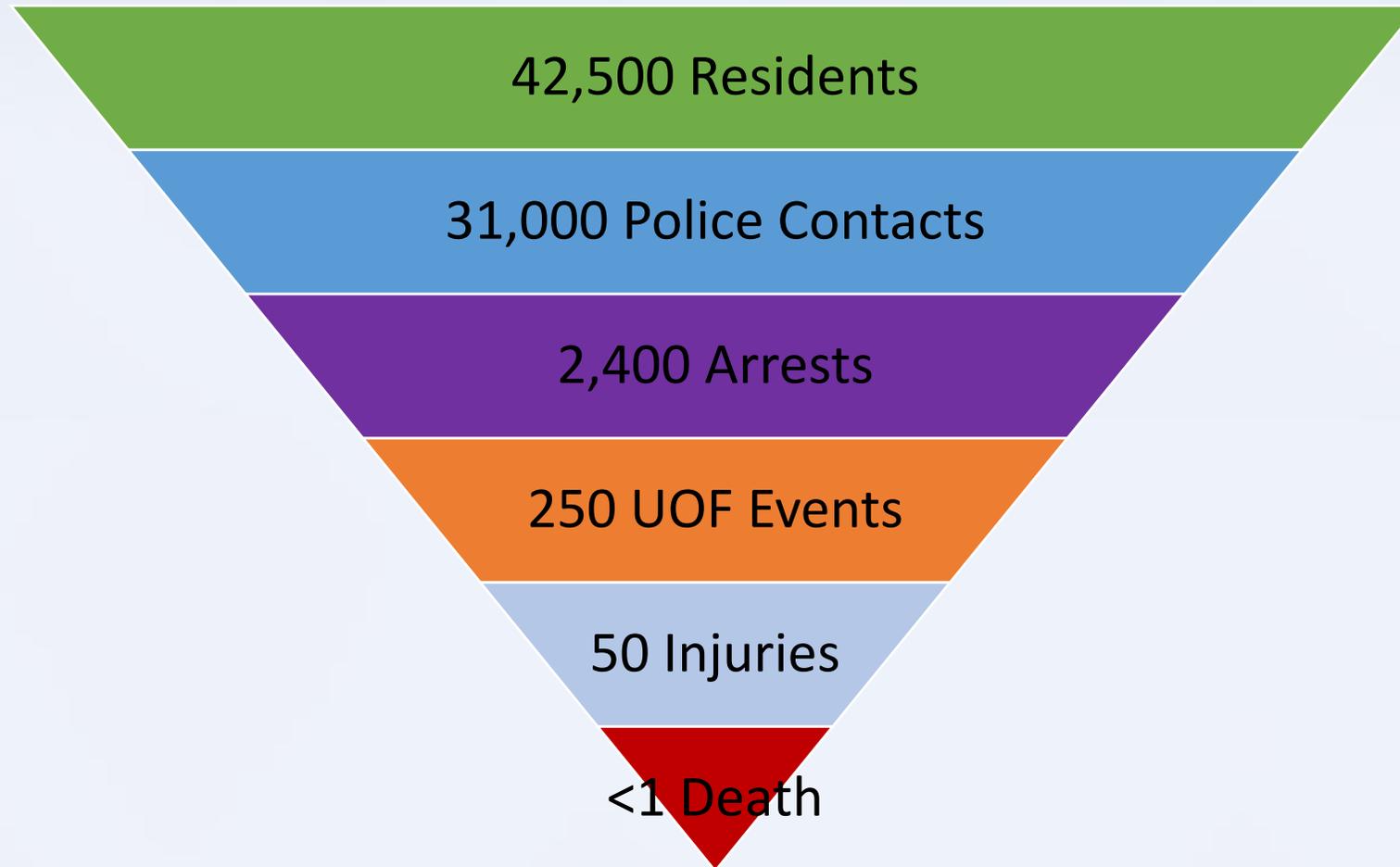
3.5 iterations of force per suspect

4.2 iterations of force per event



# Analysis: Scope of UOF in Burlington

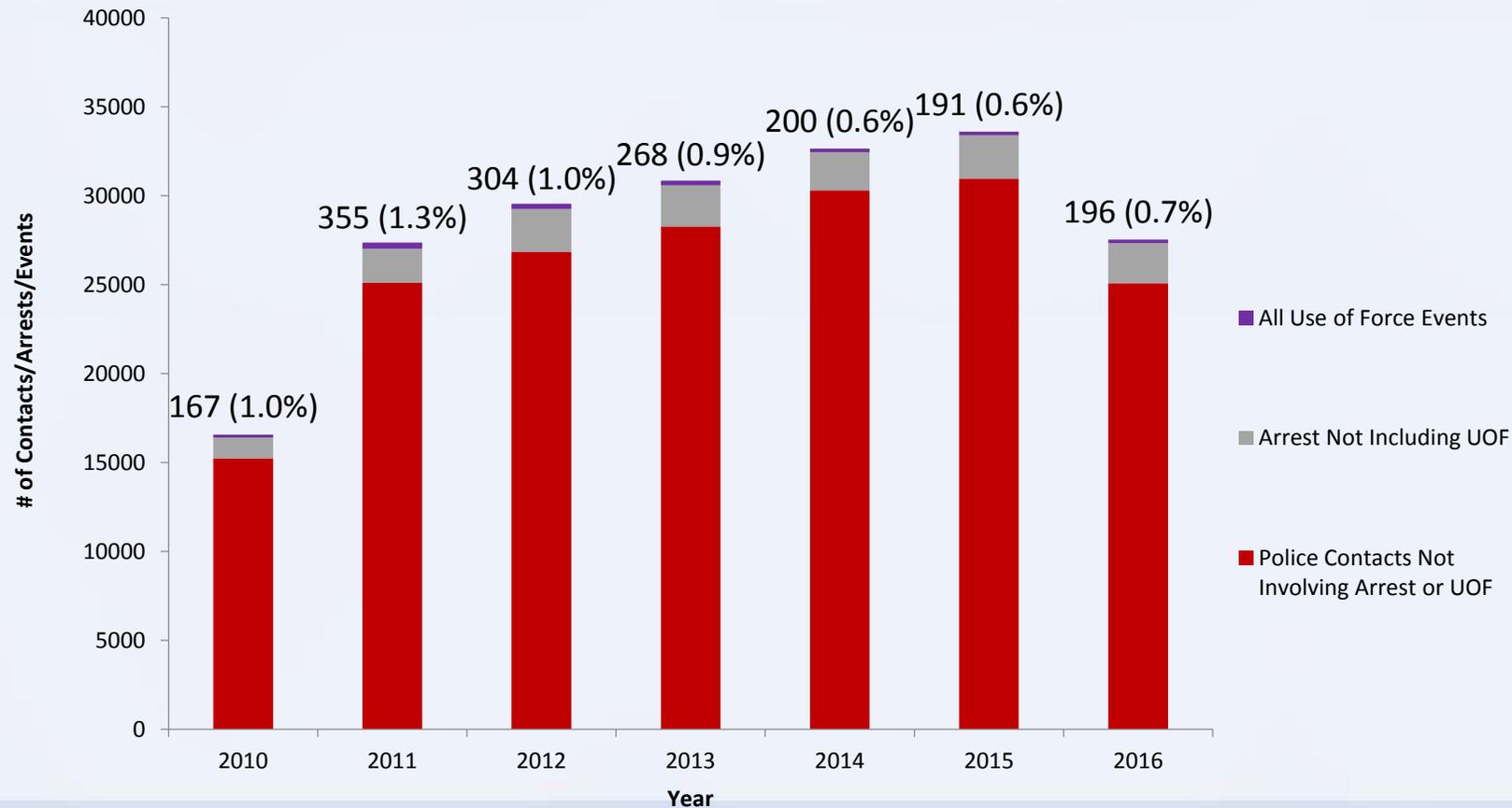
Each Year in Burlington:



# Analysis: Scope of UOF in Burlington



## UOF Events by Year Compared to Police Contacts and Arrests

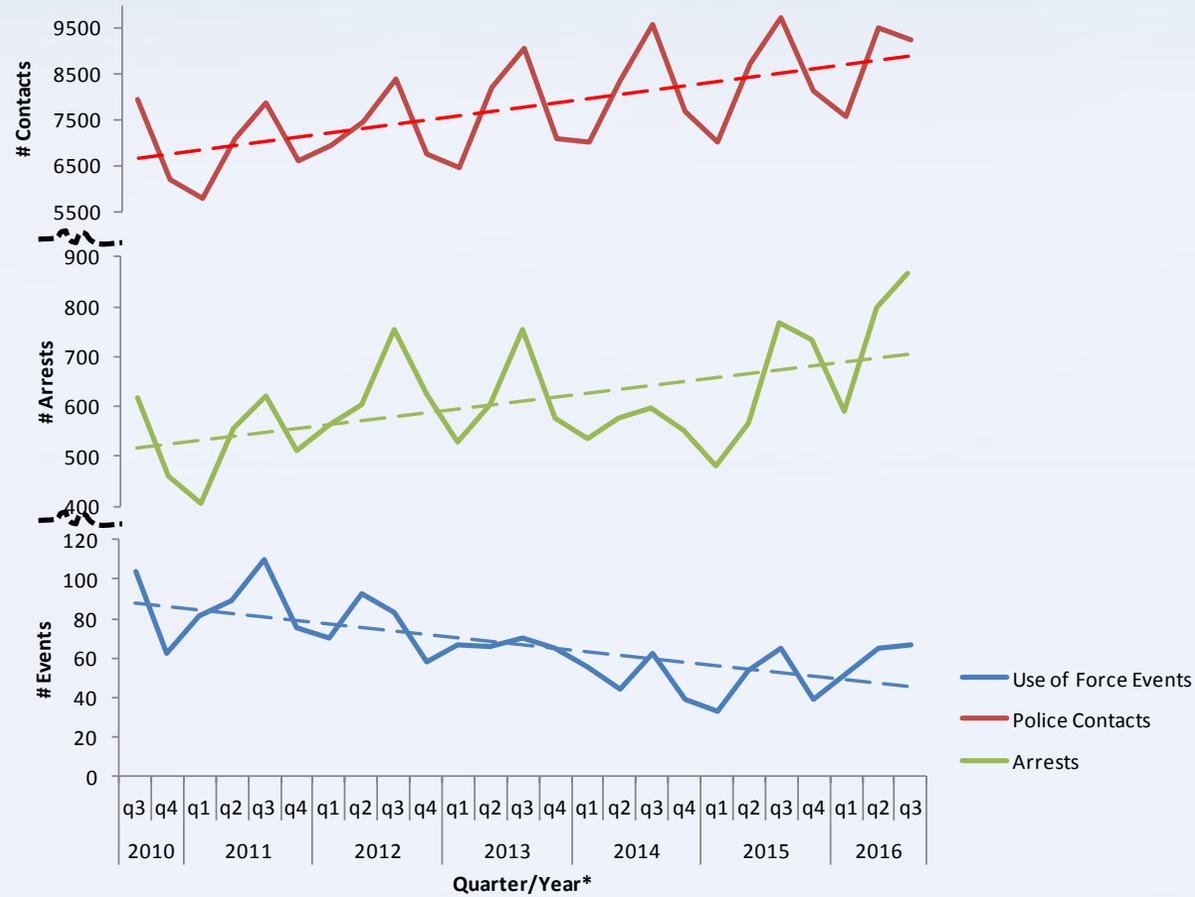


UOF events make up 1% of police contacts and 11% of arrests

# Analysis: Scope of UOF in Burlington



Use of Force Events Compared to Calls for Service and Arrests 2010-2016



# Analysis: Description of Data



**Table I. Types of Suspect Resistance and Officer Force Used in UOF Interactions**

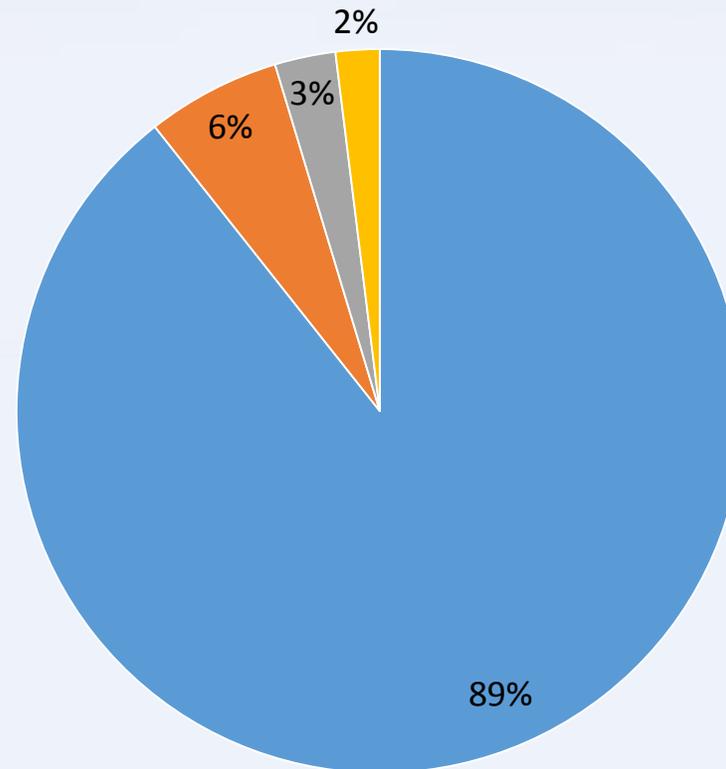
Type of Resistance	Suspect Resistance		Type of Force	Officer Force	
	# Unique Interactions	% Unique Interactions		# Unique Interactions	% Unique Interactions
Weapon used by Suspect	87	3.1%	Firearm Fired	4	0.1%
Simple Assault on LEO	69	2.4%	Projectile Launcher Used	5	0.2%
Assaultive	411	14.6%	Canine Bite	5	0.2%
Active Physical Resistance	1444	51.2%	Taser Used	81	2.9%
Escape/Flee from Detention	283	10.0%	Taser Shotgun Used	2	0.1%
Pre Assault Cues	310	11.0%	Firearm Pointed	644	22.8%
Passive Physical Resistance	209	7.4%	Baton Used	19	0.7%
Verbalized Challenge/Threats or Non Compliance	107	3.8%	OC Spray Used	306	10.9%
Refused Verbal Commands and Directions	843	29.9%	Taser Pointed	104	3.7%
Walked/Ran Away	90	3.2%	OC Spray Pointed	78	2.8%
None	701	24.9%	Projectile Launcher Presented	7	0.2%
			Taser Displayed	88	3.1%
			Empty Hand Techniques/Pain Compliance	948	33.6%
			Physical Force	881	31.3%
			Canine Command Presence	18	0.6%
			Baton Presented	12	0.4%
			Baton Escort	20	0.7%
			Applied Handcuffs/Tightness/Double Locked	708	25.1%
			Verbal Commands/Directions Given	1403	49.8%
			Other	252	8.9%
			None	103	3.7%
<b>Total Unique Interactions:</b>	<b>2819</b>		<b>Total Unique Interactions:</b>	<b>2819</b>	

# Analysis: Weapons Used During Arrests



## Most Severe Force Used in Interactions Involving an Arrest (n=15,423)

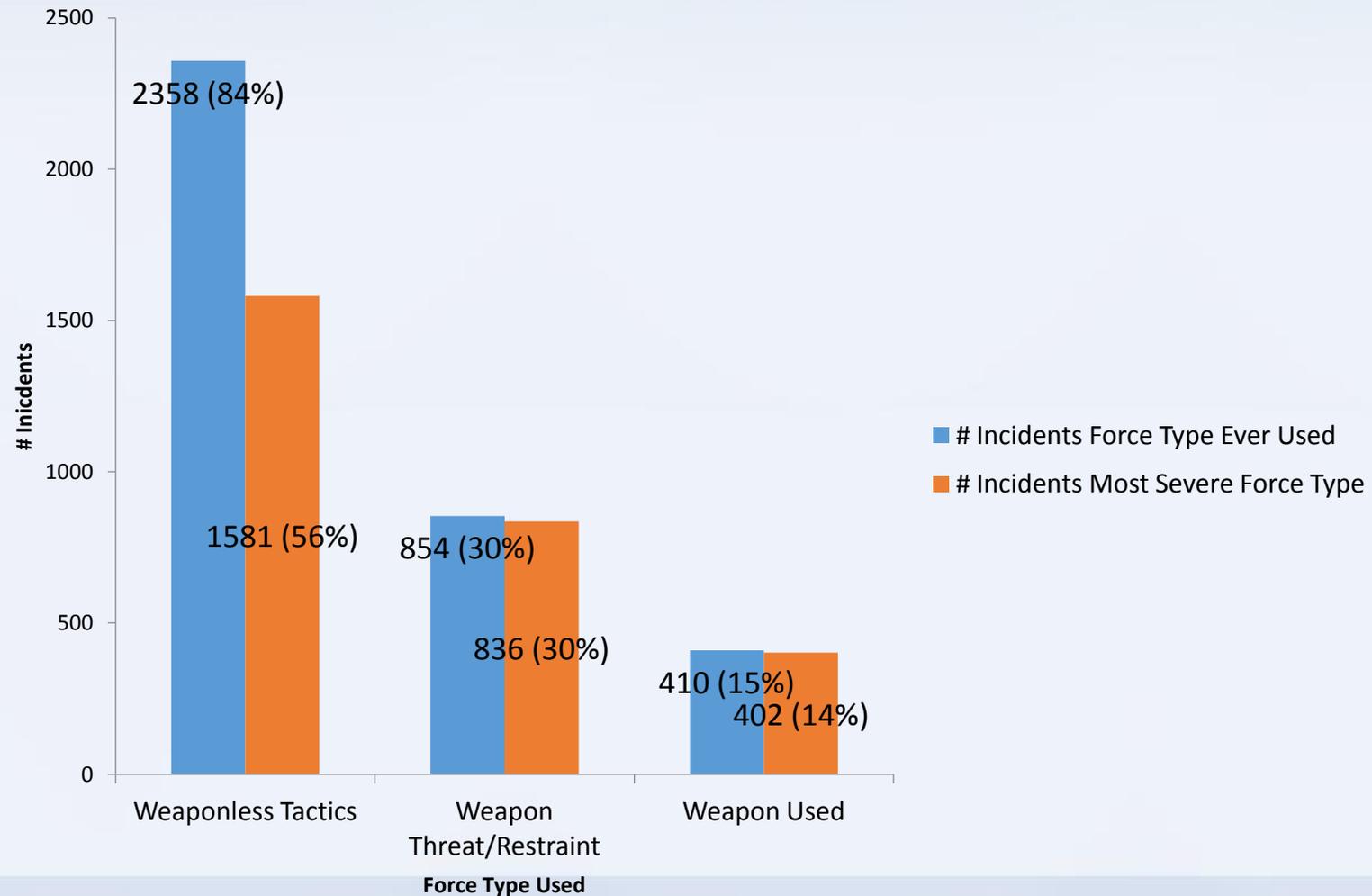
■ No Force Used   ■ Weaponless Tactics   ■ Weapon Threat/Restraint   ■ Weapon Used



# Analysis: Weapons Used During UOF Incidents



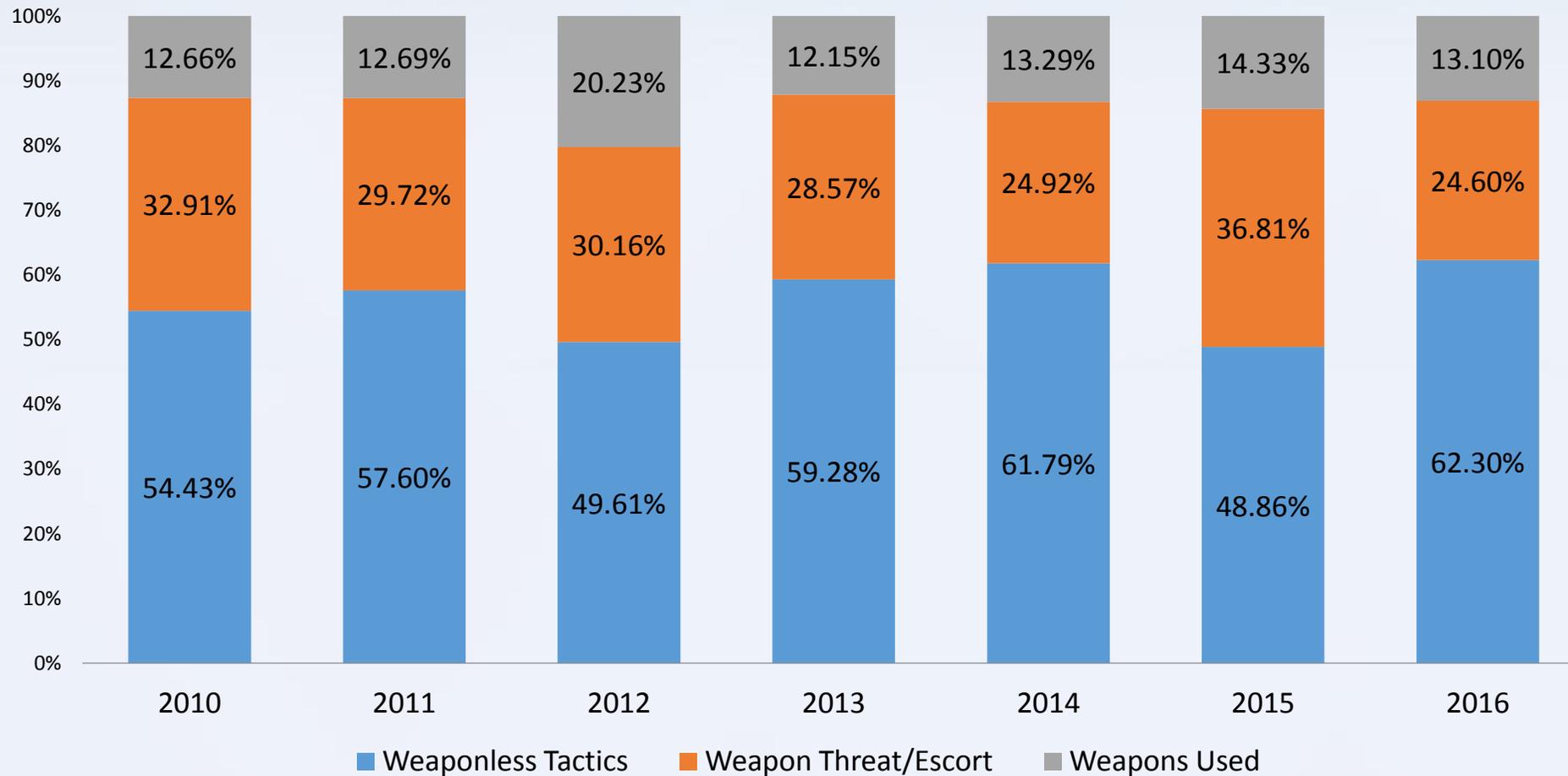
## Force Types Used in UOF Interactions Compared to Most Severe Force Type Used Per Interaction



# Analysis: Weapons Used During UOF Incidents



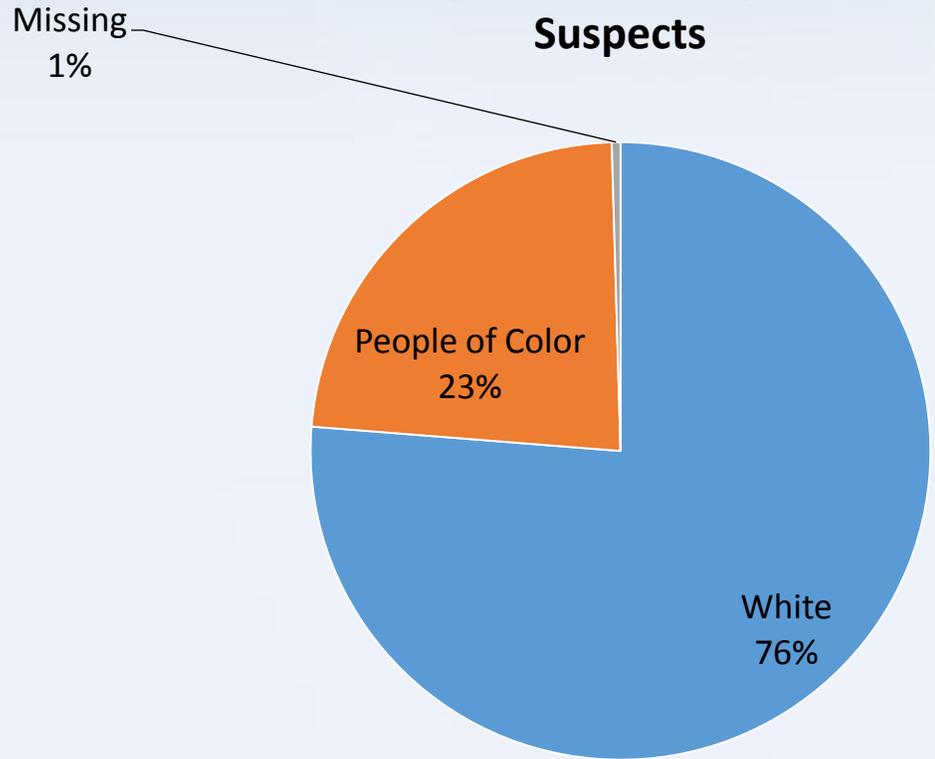
Most Severe Police Force Type Used Per Unique Interaction by Year  
(n=2819)



# Analysis: Racial Breakdown



White vs People of Color Population in UOF Suspects

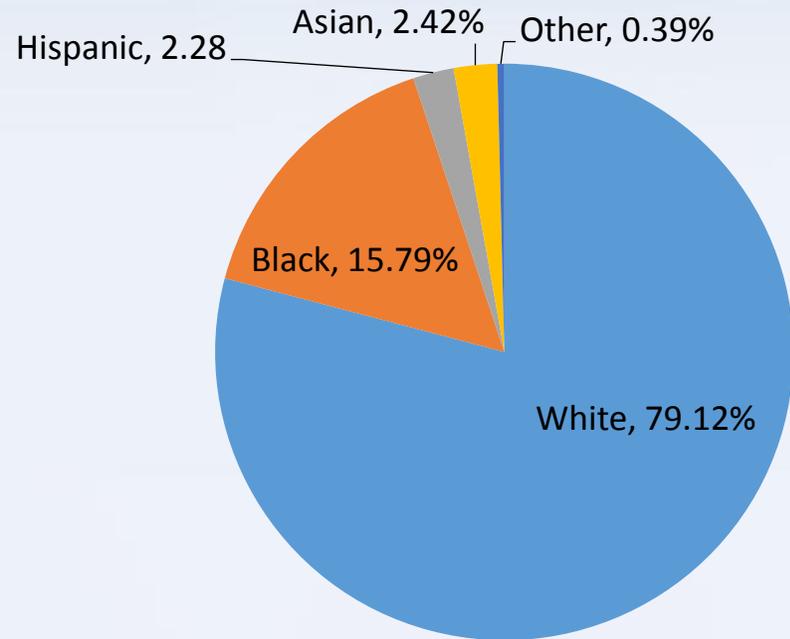


<u>Race/Ethnicity</u>	<u># Suspects</u>	<u>% Suspects</u>
White	1516	76.26%
Black	354	17.81%
Hispanic	44	2.21%
Asian	33	1.66%
Other	32	1.61%
Missing	9	0.45%
<b>Total</b>	<b>1988</b>	<b>100.00%</b>

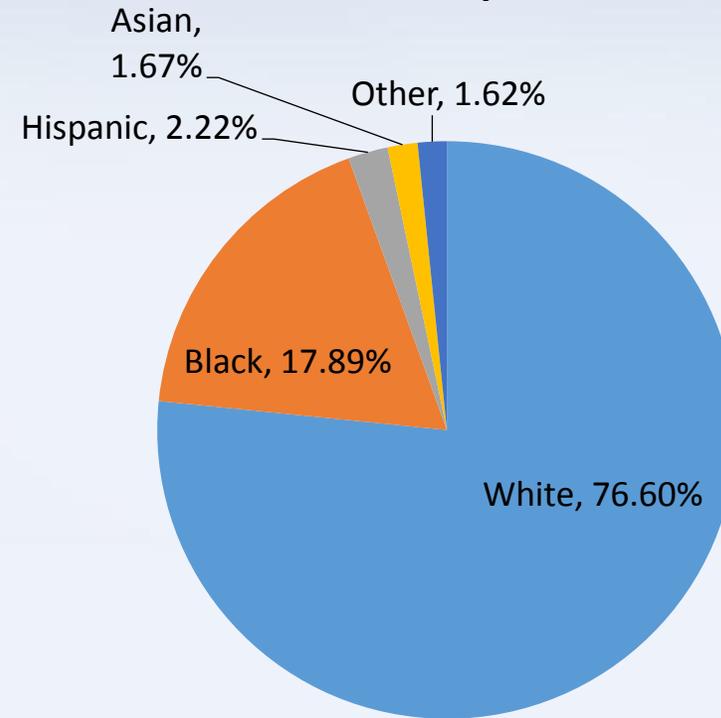


# Analysis: Racial Breakdown

**BPD Arrest Population**

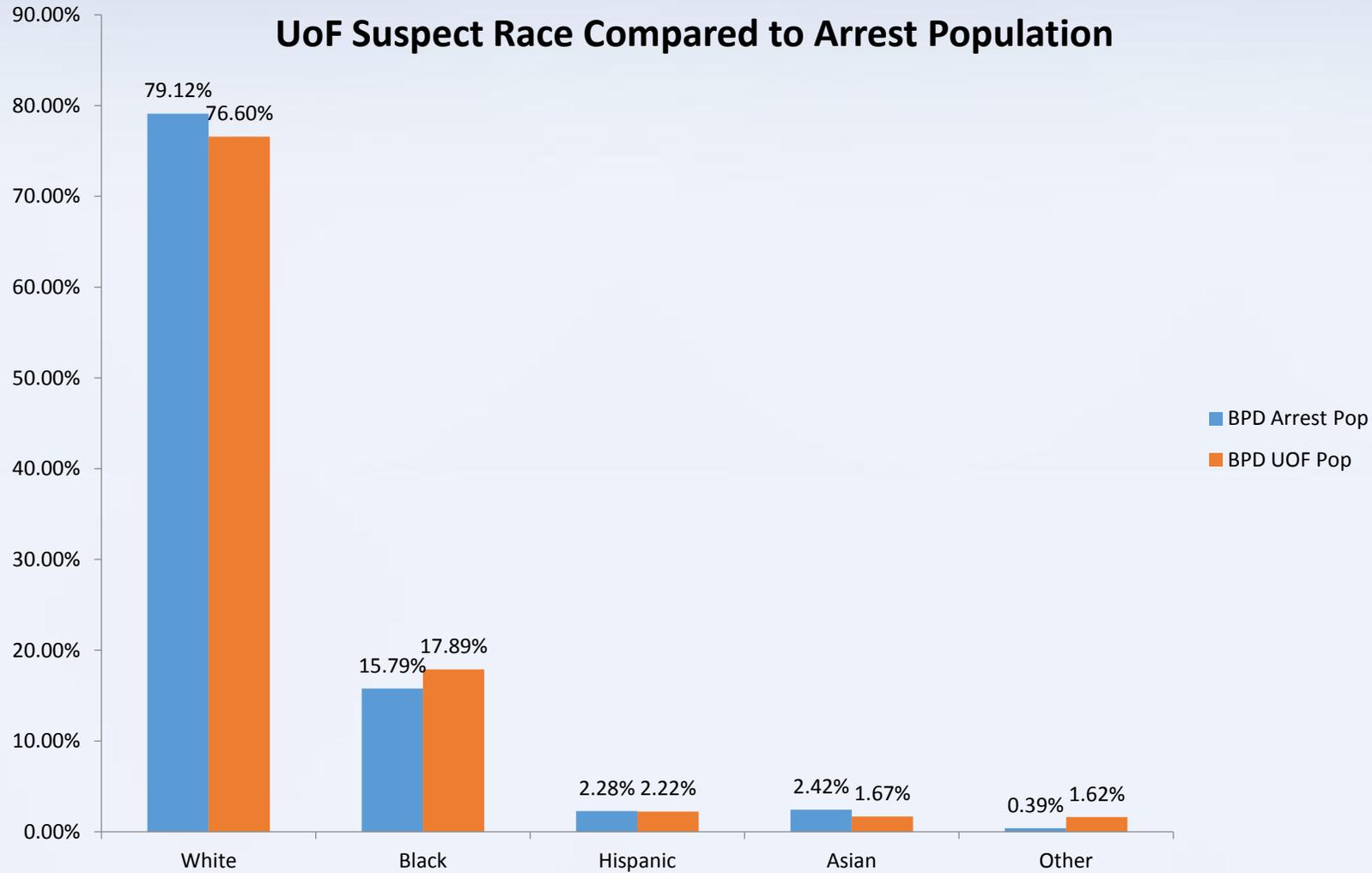


**BPD UoF Population**



Race/Ethnicity	# Suspects	% Suspects	% Arrest Suspects
White	1516	76.60%	79.12%
Black	354	17.89%	15.79%
Hispanic	44	2.22%	2.28%
Asian	33	1.67%	2.42%
Other	32	1.62%	0.39%
<b>Total</b>	<b>1979</b>	<b>100.00%</b>	<b>100.00%</b>

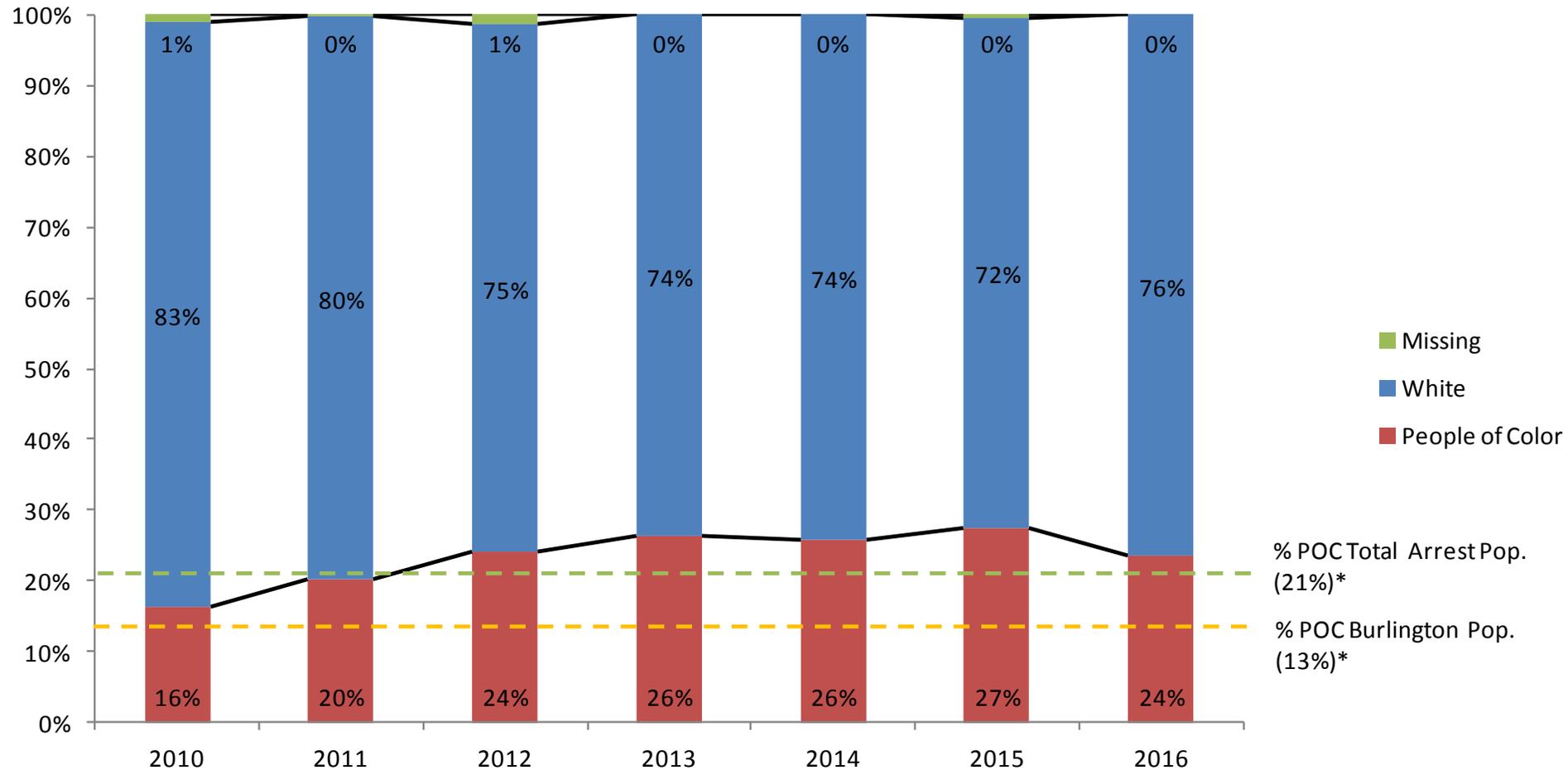
# Analysis: Racial Breakdown



# Analysis: Racial Breakdown



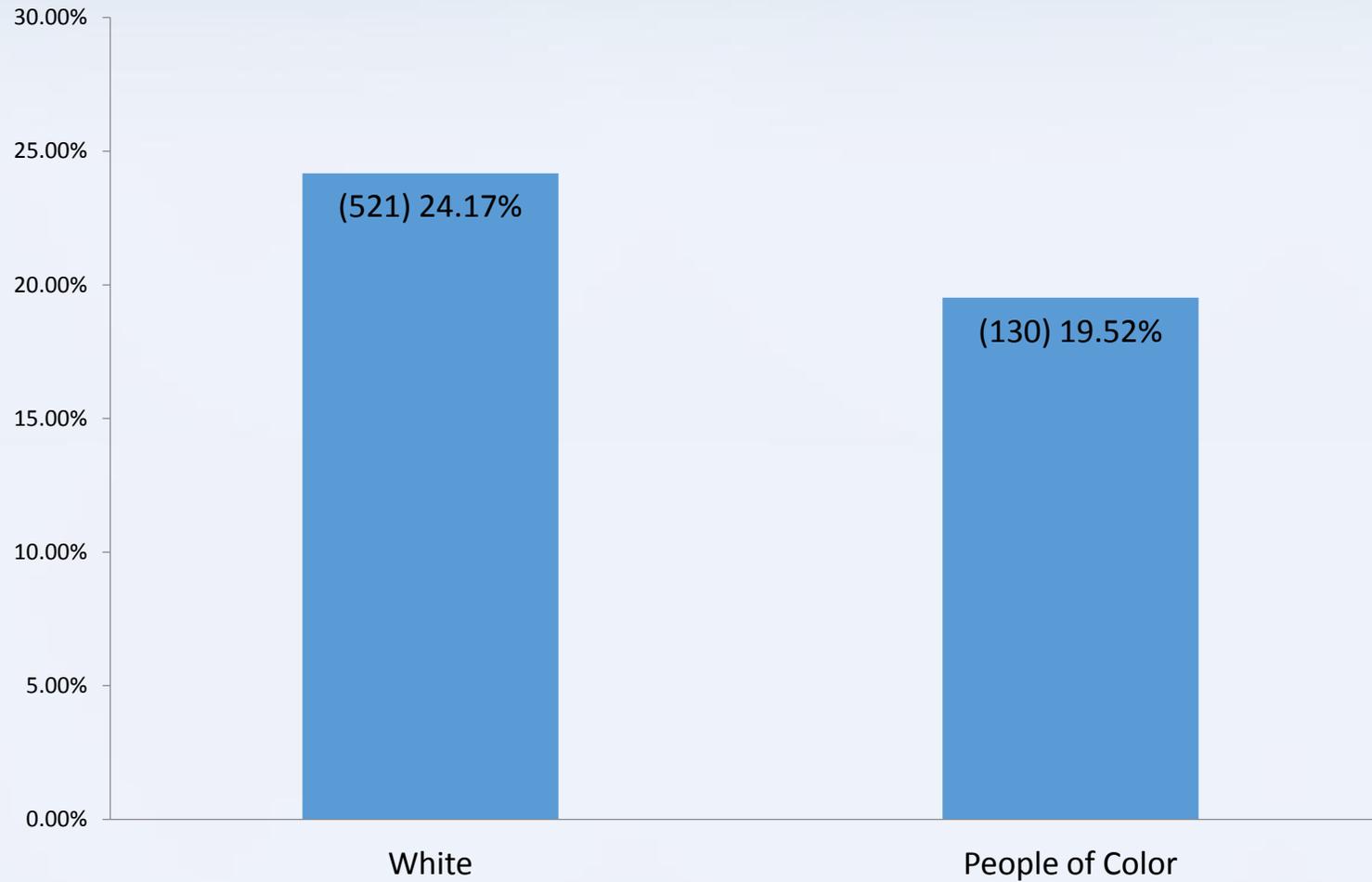
## UOF Suspect Race Compared to Community Population and Arrest Population (n=1988)



# Analysis: Injuries by Race



UOF Interactions Involving Injury to Suspect by Suspect Race



# Analysis: Using Controls



## Type of Resistance by Race (most severe)

Resistance Type	White		People of Color		p value
	#	%	#	%	
<b>Active Physical Resistance</b>	893	41.67%	218	32.73%	<b>0.000</b>
<b>None</b>	141	6.58%	84	12.61%	<b>0.000</b>
Weapon Used by Suspect	100	4.67%	29	4.35%	0.737
Simple Assault Against LEO	91	4.25%	31	4.50%	0.774
Assaultive	374	17.45%	124	18.62%	0.491
Escape	109	5.09%	30	4.50%	0.545
PreAssaultive Cues	78	3.64%	31	4.65%	0.236
Passive Physical Resistance	131	6.11%	39	5.86%	0.808
Verbalized Challenge/Threats or NonCompliance	23	1.07%	6	0.90%	0.701
Refused Verbal Commands/Directions	133	6.21%	55	8.26%	0.064
Walked/Ran Away	70	3.27%	20	3.00%	0.736

# Analysis: Using Controls



Call Type	People of Color		White		p-value
	#	%	#	%	
Agency Assist	27	4.1%	109	5.1%	0.278
Arrest on Warrant	42	6.3%	116	5.4%	0.382
Assault-Aggravated	31	4.7%	68	3.2%	0.070
Assault-On LEO	55	8.3%	149	7.0%	0.257
Assault-Simple	54	8.1%	138	6.4%	0.136
Attempting to Elude	4	0.6%	22	1.0%	0.316
Baracaded interaction	2	0.3%	19	0.9%	0.125
Burglary	9	1.4%	43	2.0%	0.273
Child Pornography	0	0.0%	1	0.0%	0.577
Complaint	10	1.5%	31	1.4%	0.918
Cruelty to a child	0	0.0%	3	0.1%	0.334
Custodial Interference	0	0.0%	3	0.1%	0.334
DC	120	18.0%	451	21.0%	0.090
<b>Detox</b>	26	3.9%	239	11.2%	<b>0.000</b>
DLS	1	0.2%	1	0.0%	0.382
Domestic-AGG	11	1.7%	43	2.0%	0.560
Domestic-MIS	13	2.0%	66	3.1%	0.124
<b>Domestic-VERB</b>	15	2.3%	25	1.2%	<b>0.039</b>
<b>Drugs-Possession</b>	17	2.6%	23	1.1%	<b>0.005</b>
<b>Drugs-sale</b>	27	4.1%	43	2.0%	<b>0.003</b>
DUI	8	1.2%	33	1.5%	0.524
Enabling Consumption of minors	0	0.0%	2	0.1%	0.430
Escape	0	0.0%	3	0.1%	0.334
False Public Alarms	0	0.0%	3	0.1%	0.334
FIPO	1	0.2%	5	0.2%	0.685
Hindering Arrest	1	0.2%	2	0.1%	0.695
<b>Homicide</b>	7	1.1%	1	0.0%	<b>0.000</b>
Identity Theft	1	0.2%	0	0.0%	0.073

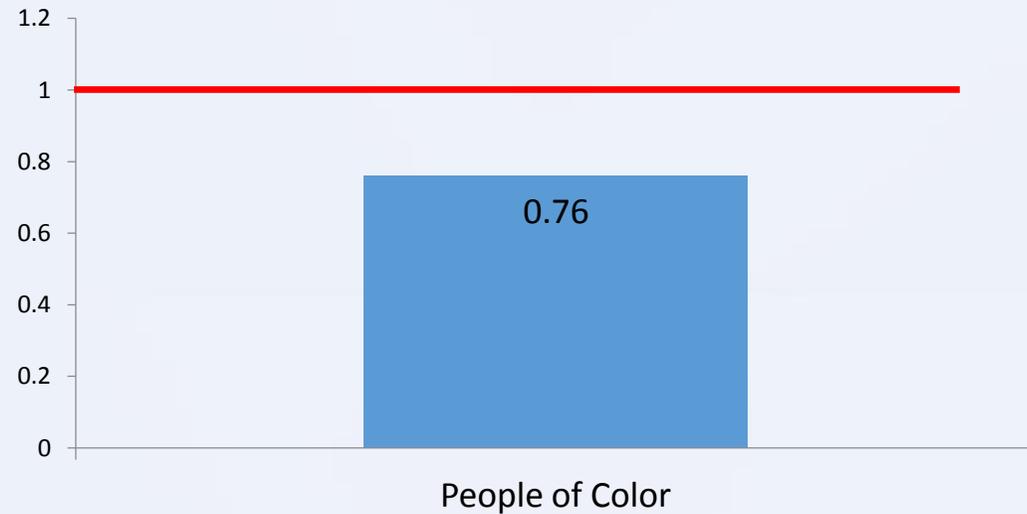
Impeding	16	2.4%	36	1.7%	0.227
Inciting a felony	1	0.2%	0	0.0%	0.073
L&L	0	0.0%	3	0.1%	0.334
larceny from Building	0	0.0%	4	0.2%	0.265
larceny from Motor vehicle	0	0.0%	6	0.3%	0.172
larceny from Person	5	0.8%	7	0.3%	0.143
larceny-Other	1	0.2%	5	0.2%	0.685
Maiming	0	0.0%	1	0.0%	0.577
Minor in Posession	2	0.3%	4	0.2%	0.579
Missing Persons	3	0.5%	2	0.1%	0.056
Motor Vehicle Accident	1	0.2%	2	0.1%	0.695
Motor vehicle Violation	3	0.5%	5	0.2%	0.358
Obstruction of Justice	2	0.3%	3	0.1%	0.391
<b>OOC</b>	9	1.4%	4	0.2%	<b>0.000</b>
Possesion of stolen property	2	0.3%	1	0.0%	0.080
Prohibited Acts	0	0.0%	3	0.1%	0.334
Reckless Endangerment	5	0.8%	13	0.6%	0.684
Resisting Arrest	18	2.7%	73	3.4%	0.370
Restraining Order Violation	2	0.3%	5	0.2%	0.762
Retail Theft	1	0.2%	12	0.6%	0.174
Runaway Juvenile	7	1.1%	13	0.6%	0.233
<b>Search Warrant</b>	65	9.8%	78	3.6%	<b>0.000</b>
Sexual Assault	0	0.0%	2	0.1%	0.430
Stalking	0	0.0%	2	0.1%	0.430
<b>Suicidal Subject</b>	3	0.5%	64	3.0%	<b>0.000</b>
Trespassing	23	3.5%	101	4.7%	0.167
Trespassing-Felony	6	0.9%	33	1.5%	0.218
Unlawful Restraint	2	0.3%	1	0.0%	0.080
UVM/Vandalism-Building	3	0.5%	4	0.2%	0.233
UVM/Vandalism-Other	4	0.6%	14	0.7%	0.882
Total	666	128.6%	2143	100.0%	

# Analysis: Injuries by Race

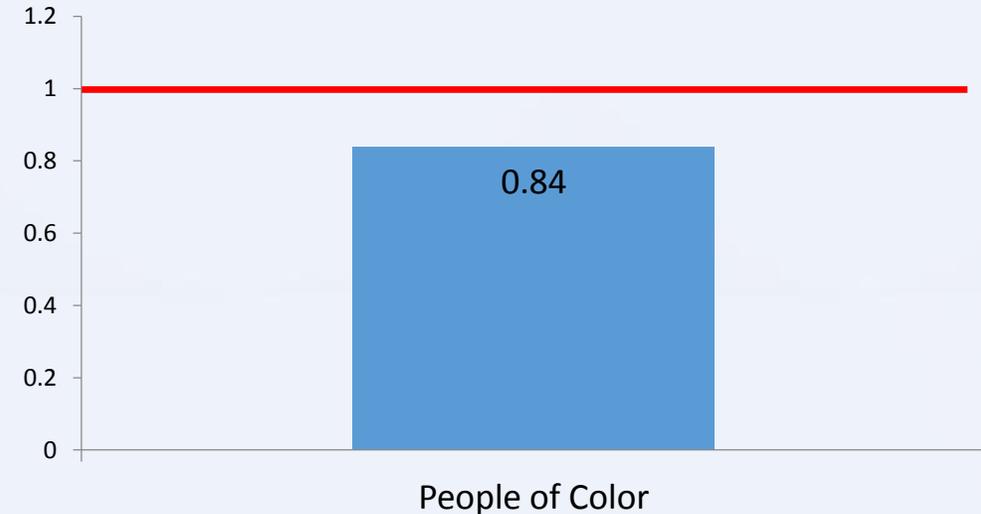


— =Odds for White Suspects (set at 1)

### Odds Ratio for Suspect Injury (baseline)



### Odds Ratio for Suspect Injury (Controls)

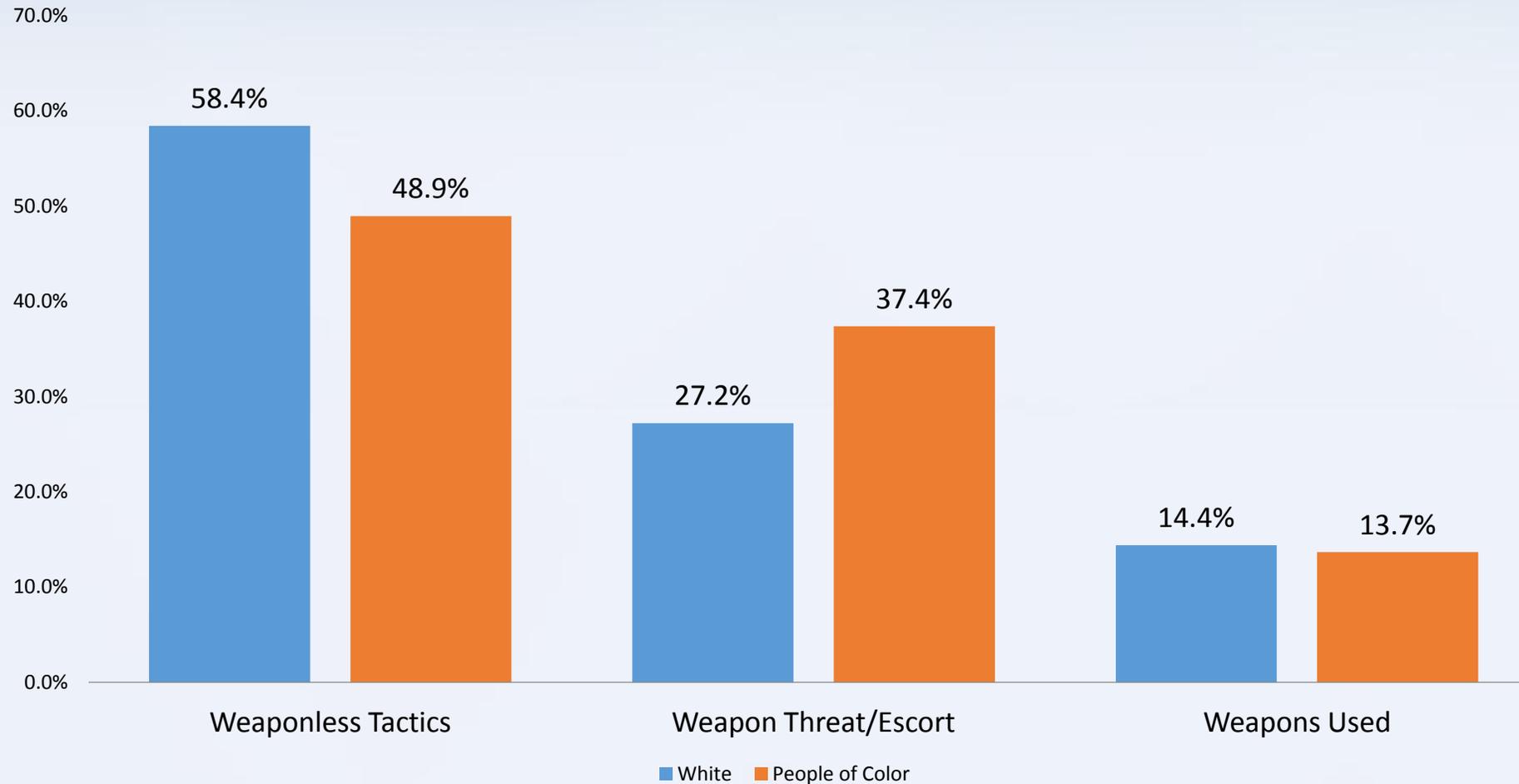


\*not statistically significant (p=.125)

# Analysis: Weapons by Race



## Most Severe Force Type Used in Interactions by Suspect Race

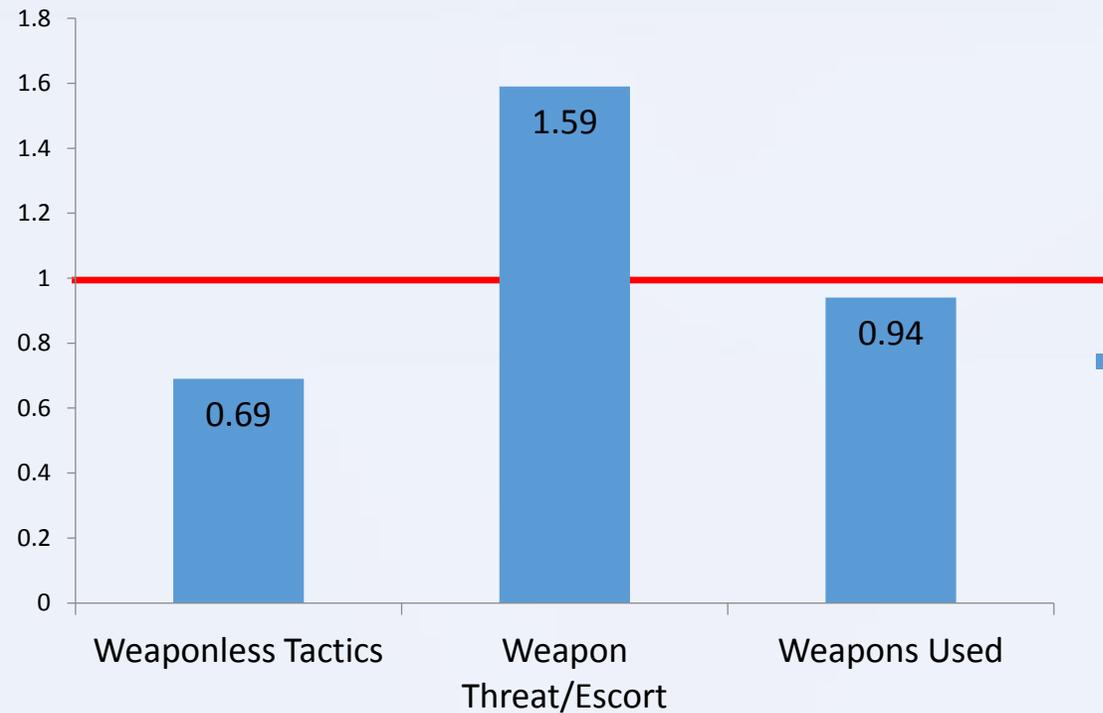


# Analysis: Weapons by Race



— =Odds for White Suspects (set at 1)

### Odds Ratio for Most Severe Force Type (baseline)



### Odds Ratio for Most Severe Force Type (Controls)



\*not statistically significant (p=.116)

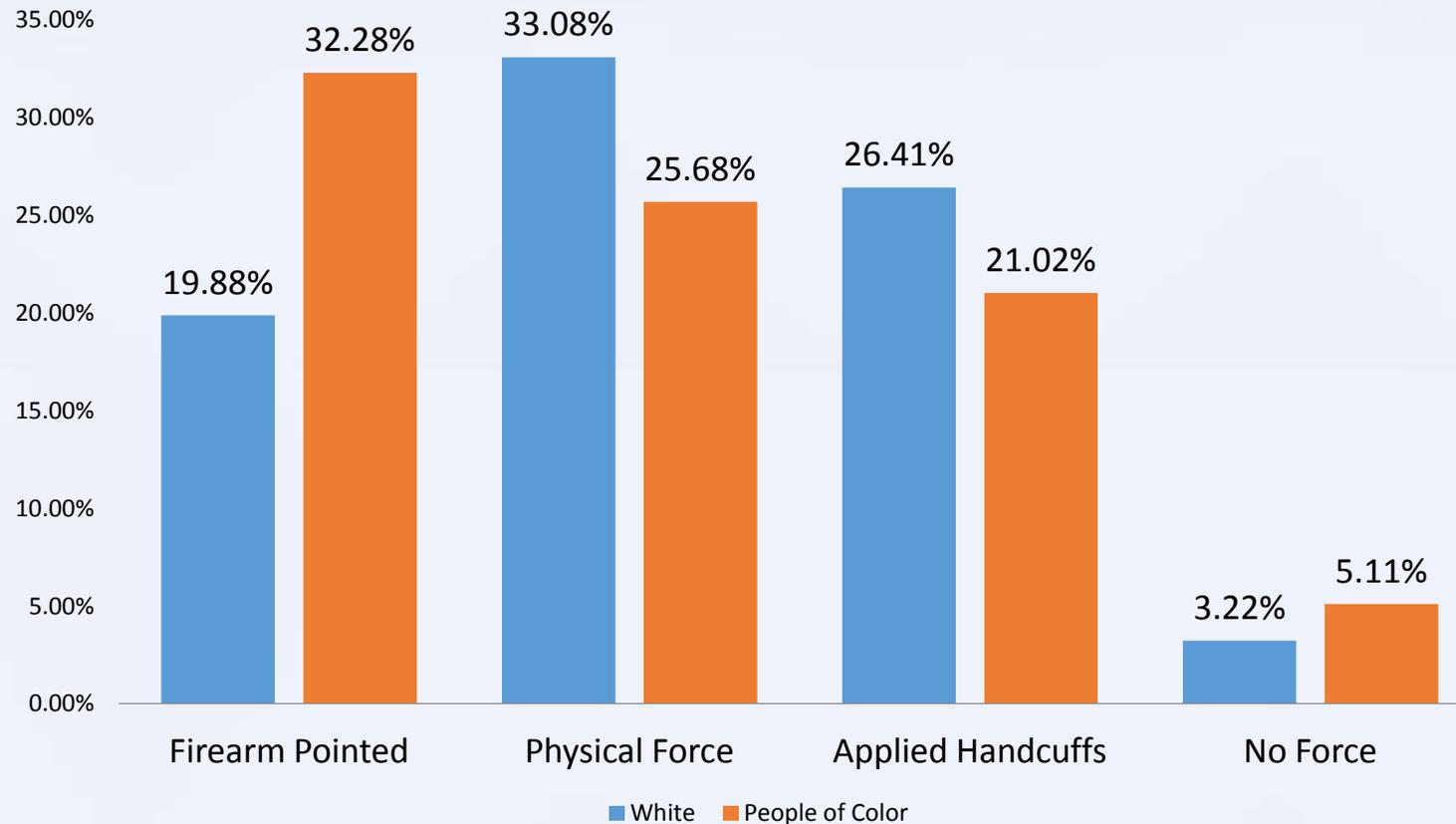
\*not statistically significant (p=.183)

\*not statistically significant (p=.621)

# Analysis: Force Type by Race



### UOF Interactions Involving Individual Force Types by Suspect Race



Only force types which differ across race groups to a statistically significant degree shown here (4).

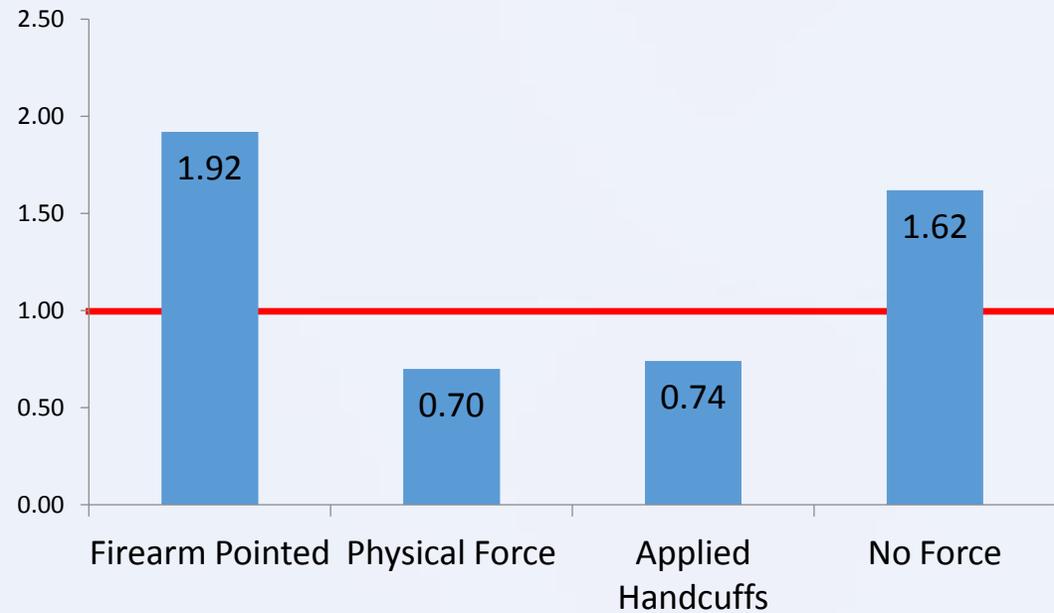


# Analysis: Force Type by Race

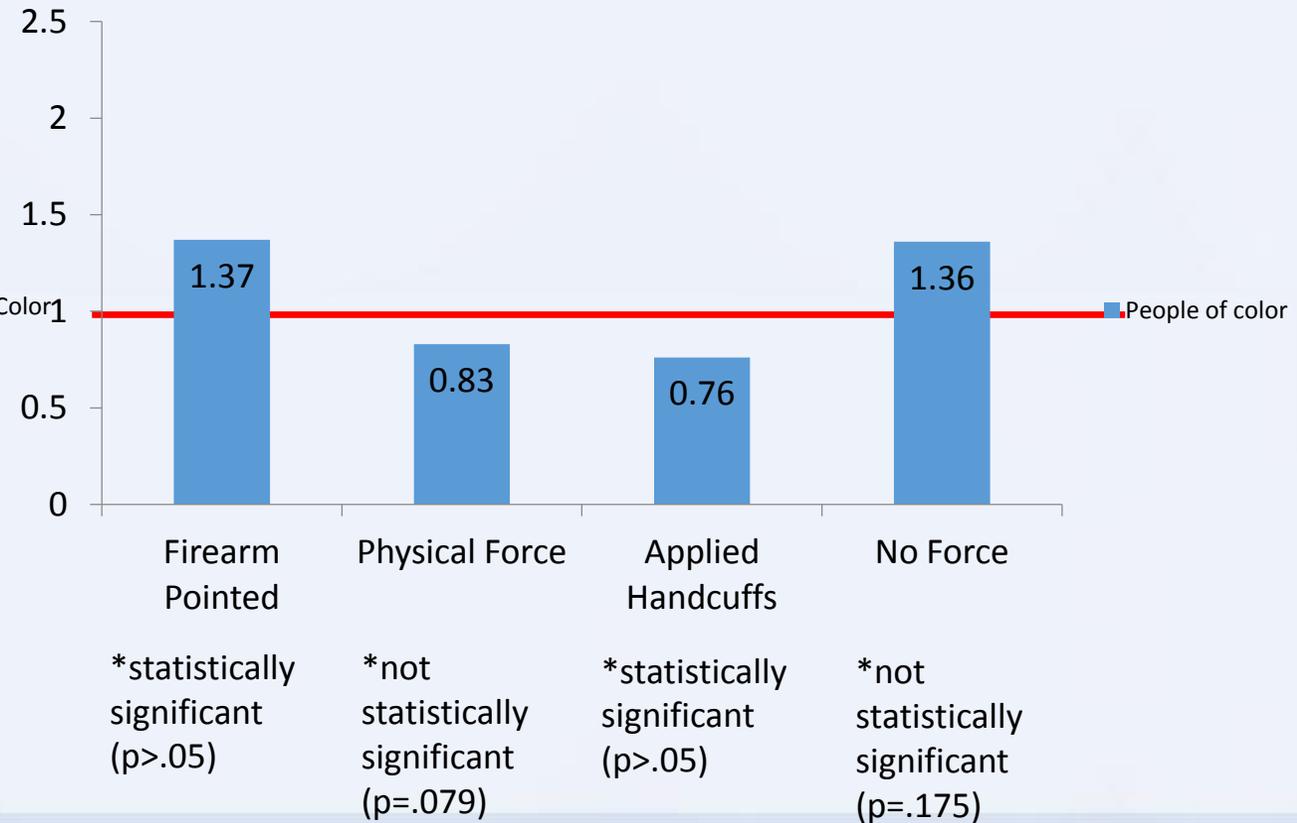
— =Odds for White Suspects (set at 1)

Only force types which differ across race groups to a statistically significant degree shown here (4).

### Odds Ratio for Individ. Force Type (baseline)



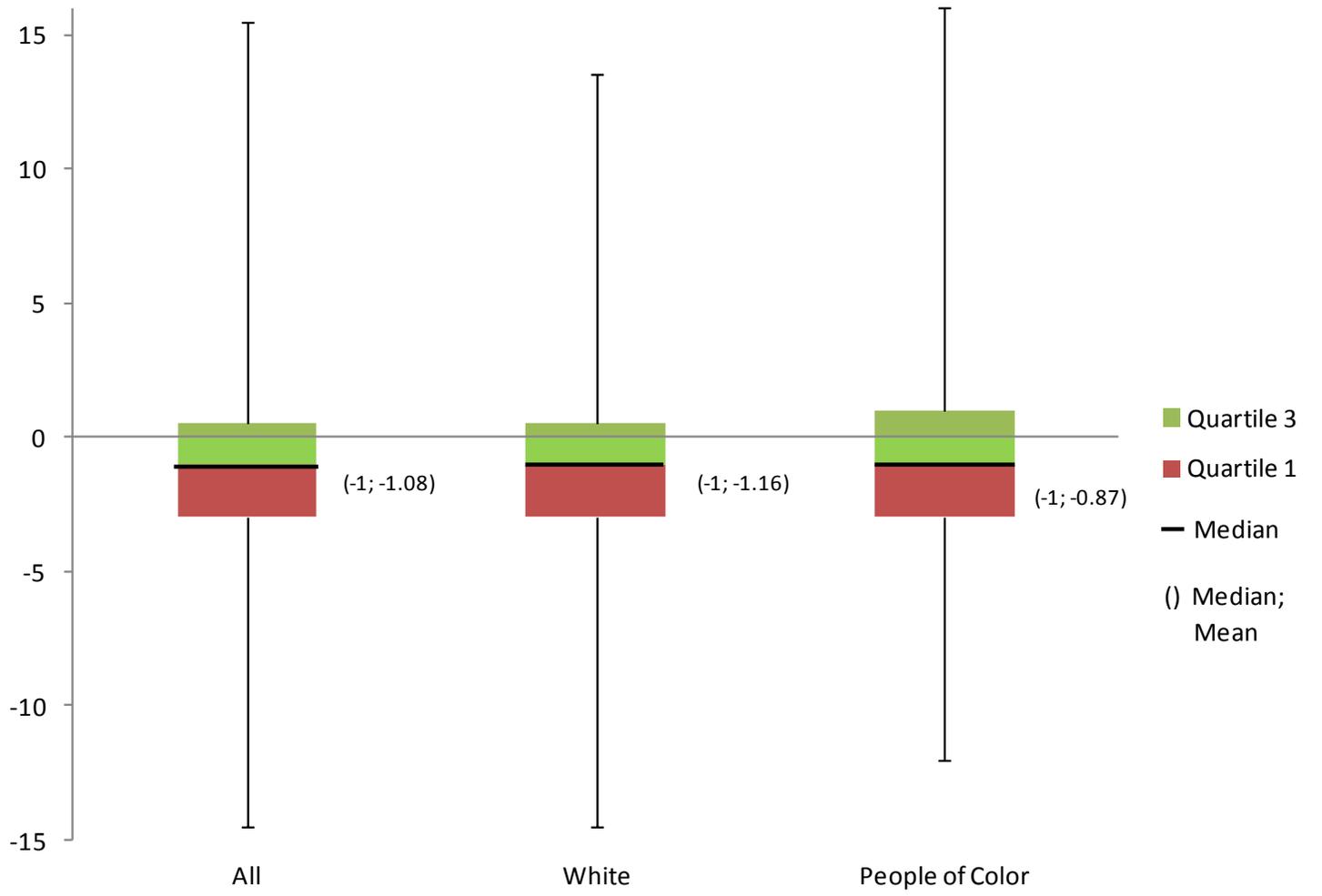
### Odds Ratio for Individ. Force Type (Controls)





# Analysis: RRR by Race

## Cumulative Relative Resistance/Response by Race

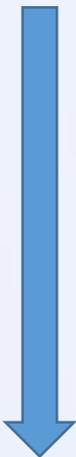


More severe response than resistance



Equal Response:Resistance

More severe resistance than response



# Main Findings



- 1) UOF incidents make up small percentage of police activity (1% of police contacts; 11% of arrests)
- 2) As arrests and calls for service have increased, UOF incidents have decreased (33 fewer UOF events per year)
- 3) In 2016, UOF incidents were comprised of a higher percentage of weaponless tactics and a lower percentage of weapon threats than from 2010-2015
- 4) People of Color are overrepresented by 10% (2 percentage points) in the pool of UOF suspects as compared to their make-up of Burlington arrest suspects
  - Black individuals specifically are overrepresented by 13% (2 percentage points)
- 5) The disparity between White and People of Color suspects in odds of having a gun pointed at them is statistically significant (People of Color 37% higher odds)
- 6) No major differences across race groupings in terms of average police force:suspect resistance ratio

# Analysis: Force Iteration Continuum



Unique Force Iteration/Response Order Continuum (% of Column)

Force Type Used	1st Iter.	2nd Iter.	3rd Iter.	4th Iter.	5th Iter.	6th Iter.	7th Iter.	8th Iter.	Total Iterations
Verbal Commands/Directions Given	41.9%	17.9%	11.7%	12.3%	14.6%	11.4%	8.3%	5.3%	1791
Applied Handcuffs/Tightness/Double Locked	2.2%	8.6%	22.5%	26.7%	19.1%	16.7%	33.3%	5.3%	726
Baton Escort	0.2%	0.4%	0.8%	0.2%	0.4%	0.0%	0.0%	0.0%	25
Baton Presented	0.1%	0.3%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	12
Canine Command Presence	0.3%	0.5%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	19
Physical Force	12.2%	21.8%	21.4%	19.8%	23.2%	23.7%	20.8%	36.8%	1236
Empty Hand Techniques/Pain Compliance	13.4%	22.8%	20.9%	18.6%	16.3%	17.5%	6.3%	10.5%	1241
Taser Presented	1.3%	1.7%	1.5%	1.1%	0.4%	0.9%	0.0%	7.7%	97
Projectile Launcher Presented	0.1%	0.2%	0.3%	0.2%	0.4%	0.0%	0.0%	0.0%	10
OC Spray Pointed	0.3%	1.8%	2.0%	1.6%	0.4%	2.6%	0.0%	0.0%	80
Taser Pointed	1.2%	2.6%	1.5%	1.3%	0.8%	0.0%	2.1%	0.0%	115
OC Spray Used	2.0%	5.8%	6.5%	6.3%	8.5%	12.3%	10.4%	0.0%	320
Baton Used	0.1%	0.3%	0.3%	0.7%	0.8%	0.0%	0.0%	0.0%	19
Firearm Pointed	17.8%	7.7%	2.4%	0.0%	1.2%	0.9%	4.2%	0.0%	687
Taser/ECD/Shotgun	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2
Taser Used	0.5%	1.5%	1.9%	4.1%	4.1%	2.6%	2.1%	5.3%	103
Canine Bite	0.1%	0.0%	0.1%	0.4%	0.0%	0.0%	0.0%	0.0%	5
Projectile Launcher Used	0.1%	0.1%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	7
Firearm Fired	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4
None	1.2%	1.7%	2.2%	2.2%	4.1%	4.4%	6.3%	10.5%	125
Other	4.8%	4.2%	3.7%	4.3%	5.7%	7.0%	6.3%	21.1%	312
<b>Total Unique Interactions</b>	2819	1977	1162	555	246	114	48	19	<b>6936</b>
<b>% Total Unique Interactions</b>	100.0%	70.2%	41.3%	19.6%	8.4%	3.8%	1.6%	0.5%	<b>100%</b>

# Analysis: Resistance/Response Table



Most Severe Suspect Resistance Type Compared to Most Severe Officer Force Type Per Interaction (% of Column)

Force Type Used	None	Walked or Ran Away	Refused Verbal Commands	Verbal Challenge/Threat	Passive Physical Resist	Pre Assault Cues	Escaped or Fled	Active Physical Resist	Assaultive	Simple Assault on Leo	Weapon Used by Suspect	Total Use of Force Interactions
Verbal Commands/Directions Given	3.7%	0.0%	1.6%	6.9%	5.3%	2.8%	5.0%	1.5%	0.8%	0.0%	0.0%	56
Applied Handcuffs/Tightness/Double Locked	5.4%	4.3%	2.3%	0.0%	3.7%	4.7%	5.2%	2.5%	1.2%	0.9%	2.4%	76
Baton Escort	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.6%	0.0%	0.0%	0.0%	7
Baton Presented	0.0%	0.0%	1.1%	0.0%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	4
Canine Command Presence	0.0%	4.3%	1.1%	3.4%	0.0%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	6
Physical Force	1.0%	8.7%	11.4%	3.4%	13.4%	13.2%	14.9%	29.5%	25.5%	30.2%	7.9%	573
Empty Hand Techniques/Pain Compliance	2.7%	4.3%	13.7%	24.1%	22.0%	27.4%	20.1%	40.3%	36.0%	31.0%	6.3%	791
Taser Presented	2.3%	4.3%	2.3%	13.8%	1.2%	4.7%	4.5%	1.4%	2.8%	0.9%	0.8%	60
Projectile Launcher Presented	0.0%	0.0%	1.1%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.8%	4
OC Spray Pointed	0.3%	0.0%	0.0%	0.0%	1.8%	3.8%	0.7%	1.9%	1.6%	3.4%	0.0%	42
Taser Pointed	1.3%	13.0%	1.7%	6.9%	1.2%	12.3%	6.0%	1.4%	3.2%	1.7%	4.7%	74
OC Spray Used	1.0%	0.0%	5.1%	10.3%	3.0%	6.6%	2.2%	13.3%	18.4%	18.1%	3.9%	291
Baton Used	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.5%	0.8%	1.7%	1.6%	14
Firearm Pointed	76.2%	60.9%	57.1%	27.6%	47.0%	18.9%	34.3%	4.3%	3.2%	3.4%	63.0%	639
Taser/ECD/Shotgun	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	2
Taser Used	0.0%	0.0%	1.1%	3.4%	0.6%	1.9%	3.0%	2.5%	5.5%	8.6%	5.5%	81
Canine Bite	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.1%	0.2%	0.0%	0.0%	5
Projectile Launcher Used	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	0.0%	0.4%	0.0%	0.8%	5
Firearm Fired	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	2.4%	4
None	0.3%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	5
Other	5.0%	0.0%	5.3%	0.0%	3.5%	2.8%	3.6%	2.5%	1.4%	4.1%	0.8%	80
<b>Total Resistance Interactions</b>	<b>298</b>	<b>23</b>	<b>188</b>	<b>29</b>	<b>170</b>	<b>109</b>	<b>139</b>	<b>1112</b>	<b>501</b>	<b>121</b>	<b>129</b>	<b>2819</b>
<b>% Total Resistance Interactions</b>	<b>10.6%</b>	<b>0.8%</b>	<b>6.7%</b>	<b>1.0%</b>	<b>6.0%</b>	<b>3.9%</b>	<b>4.9%</b>	<b>39.4%</b>	<b>17.8%</b>	<b>4.3%</b>	<b>4.6%</b>	<b>100.0%</b>



END