

***THIRD REPORT TO THE STATE OF MARYLAND***  
***UNDER PUBLIC SAFETY ARTICLE § 3-508***  
**2014 Electronic Control Device (ECD) Discharges Analysis**  
**MSAR# 8735**

Maryland Statistical Analysis Center,  
Governor's Office of Crime Control & Prevention



August 27, 2015

This project was supported by award number 2010-BJ-CX-K043 by the Bureau of Justice Statistics.

## INTRODUCTION

On April 12, 2011 Senate Bill 652/House Bill 507 enacted under the *Annotated Code of Maryland, Public Safety Article § 3-508*. This law requires law enforcement agencies that issue Electronic Control Devices (ECDs)<sup>1</sup>, also known as tasers, to report certain information regarding the use of those devices to the Maryland Statistical Analysis Center (MSAC) located in the Governor's Office of Crime Control & Prevention (GOCCP), under Executive Order 01.01.2007.04. MSAC and the Police and Correctional Training Commissions (PCTC) worked with law enforcement and legal representatives to develop a standardized, efficient, user friendly format to record and report data required under this law.

## METHODOLOGY

This report represents all ECD discharges by law enforcement during the 2014 calendar year that were reported to MSAC. The law requires the submission of annual ECD data to MSAC by March 31st of the following year. All data sets were received in an excel format, as required, and later combined, merged, standardized, and analyzed using IBM SPSS (Statistical Package for the Social Sciences) Statistics version 20 to formulate this report. IBM SPSS Statistics version 20 is a system package widely accepted and used by researchers and social scientists. For the purpose of this report, an ECD discharge means an ECD was fired at a person; it does not include an ECD that was fired during a training exercise. Also, accidental discharges, as well as an ECD fired at an animal, are not included in the report. Law enforcement agencies that issued and used ECDs reported the following data:

- The number of times an ECD was discharged by the agency in the past year;
- The time, date, and location (zip code) of the discharge;
- The type of incident (e.g. non-criminal, criminal, or traffic stop) in which the person against whom the ECD was discharged was involved prior to the discharge;
- The reason for each discharge (e.g. non-threatening non-compliance, threat of force, and use of force);
- The type of mode used (e.g. probe, drive stun, or both) of the discharge;
- The number of ECD cycles, the duration of each cycle, and the duration between cycles of the discharge;
- The point of impact of each discharge (e.g., arm, back torso, buttocks, front torso, groin/hip, head, leg, neck, side, clothing, or miss);
- The race, gender, and age, of each person against whom the ECD was discharged;

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<sup>1</sup> According to the *Annotated Code of Maryland, Public Safety Article § 3-508 (A)(3)*, an Electronic Device is defined as a portable device designed as a weapon capable of injuring, immobilizing, or inflicting pain on an individual by the discharge of an electrical current.

- The type of weapon (e.g., firearm, edged, blunt force, or other), if any, possessed by the person against whom the ECD was discharged, and the threat of any weapon;
- Any injury or death resulting from the discharge other than punctures or lacerations caused by the ECD contact or the removal of ECD probes; and
- The type of medical care, if any, provided to the person against whom the ECD was discharged, other than the treatment for punctures or lacerations caused by the ECD contact or the removal of ECD probes.

## RESULTS

In the calendar year 2014, a total of 977 ECD discharges were reported by 57 agencies. Another 20 agencies used ECDs but did not report any discharges during the reporting period. All remaining agencies reported that ECDs were not issued to officers and therefore are exempt from reporting and were excluded from the analysis. All law enforcement agencies in the State of Maryland that use ECDs will be required to report to the state of Maryland Indefinitely.

**Table 1. Number and Percent of ECD Discharges by Agency**

Agency	Frequency	Percent	Agency	Frequency	Percent
Aberdeen Police Department	10	1.0%	Hancock Police Department	0	0.0%
Allegany County Sheriff's Office	4	0.4%	Harford County Sheriff's Office	30	3.1%
Annapolis Police Department	16	1.6%	Havre De Grace Police Department	5	0.5%
Anne Arundel Police Department	39	4.0%	Howard County Police Department	13	1.3%
Baltimore City Police Department	314	32.1%	Hurlock Police Department	3	0.3%
Baltimore County Police Department	128	13.1%	Hyattsville Police Department	7	0.7%
Baltimore County Sheriff's Office	2	0.2%	Kent County Sheriff's Office	0	0.0%
Baltimore Environmental Police	0	0.0%	Landover Hills Police Department	0	0.0%
Bel Air Police Department	0	0.0%	La Plata Police Department	7	0.5%
Berlin Police Department	2	0.2%	Laurel Police Department	5	0.5%
Boonsboro Police Department	2	0.2%	Maryland State Police	0	0.0%
Bowie Police Department	1	0.1%	Maryland Transportation Authority Police	5	0.5%
Brunswick Police Department	0	0.0%	MD National Capital Park Montgomery County	0	0.0%
Calvert County Sheriff's Office	9	0.9%	MD National Capital Park PG County	2	0.2%
Cambridge Police Department	5	0.5%	Montgomery County Police Department	58	5.9%
Capitol Heights Police Department	0	0.0%	Montgomery County Sheriff's Office	5	0.5%
Caroline County Sheriff's Office	3	0.3%	Morningside Police Department	1	0.1%
Cecil County Sheriff's Office	7	0.7%	Mount Rainier Police Department	10	1.0%
Centreville Police Department	0	0.0%	New Carrollton Police Department	10	1.0%

Charles County Sheriff's Office	42	4.3%	Oakland Police Department	0	0.0%
Chestertown Police Department	4	0.4%	Ocean City Police Department	15	1.5%
Cheverly Police Department	1	0.1%	Oxford Police Department	0	0.0%
Colmar Manor Police Department	0	0.0%	Perryville Police Department	0	0.0%
Crofton Police Department	1	0.1%	Pocomoke City Police Department	3	0.3%
Cumberland Police Department	4	0.4%	Prince George's County Police Department	82	8.4%
Denton Police Department	1	0.1%	Prince George's County Sheriff's Office	14	1.4%
District Heights Police Department	0	0.0%	Queen Anne's County Sheriff's Office	3	0.3%
Dorchester Police Department	4	0.4%	Ridgely Police Department	0	0.0%
Edmonston Police Department	0	0.0%	Rising Sun Police Department	1	0.1%
Elkton Police Department	8	0.8%	Riverdale Park Police	7	0.7%
Frederick Police Department	0	0.0%	Rockville Police Department	4	0.4%
Frostburg Police Department	4	0.4%	Smithsburg Police Department	0	0.0%
Fruitland Police Department	0	0.0%	Somerset County Sheriff's Office	1	0.1%
Gaithersburg Police Department	5	0.5%	St. Mary's County Sheriff's Office	24	2.5%
Garrett County Sheriff's Office	2	0.2%	Takoma Park Police Department	3	0.3%
Greenbelt Police Department	4	0.4%	Washington County Sheriff's Office	11	1.1%
Greensboro Police Department	0	0.0%	Wicomico County Sheriff's Office	9	0.9%
Hagerstown Police Department	11	1.1%	Worcester County Sheriff's Office	1	0.1%

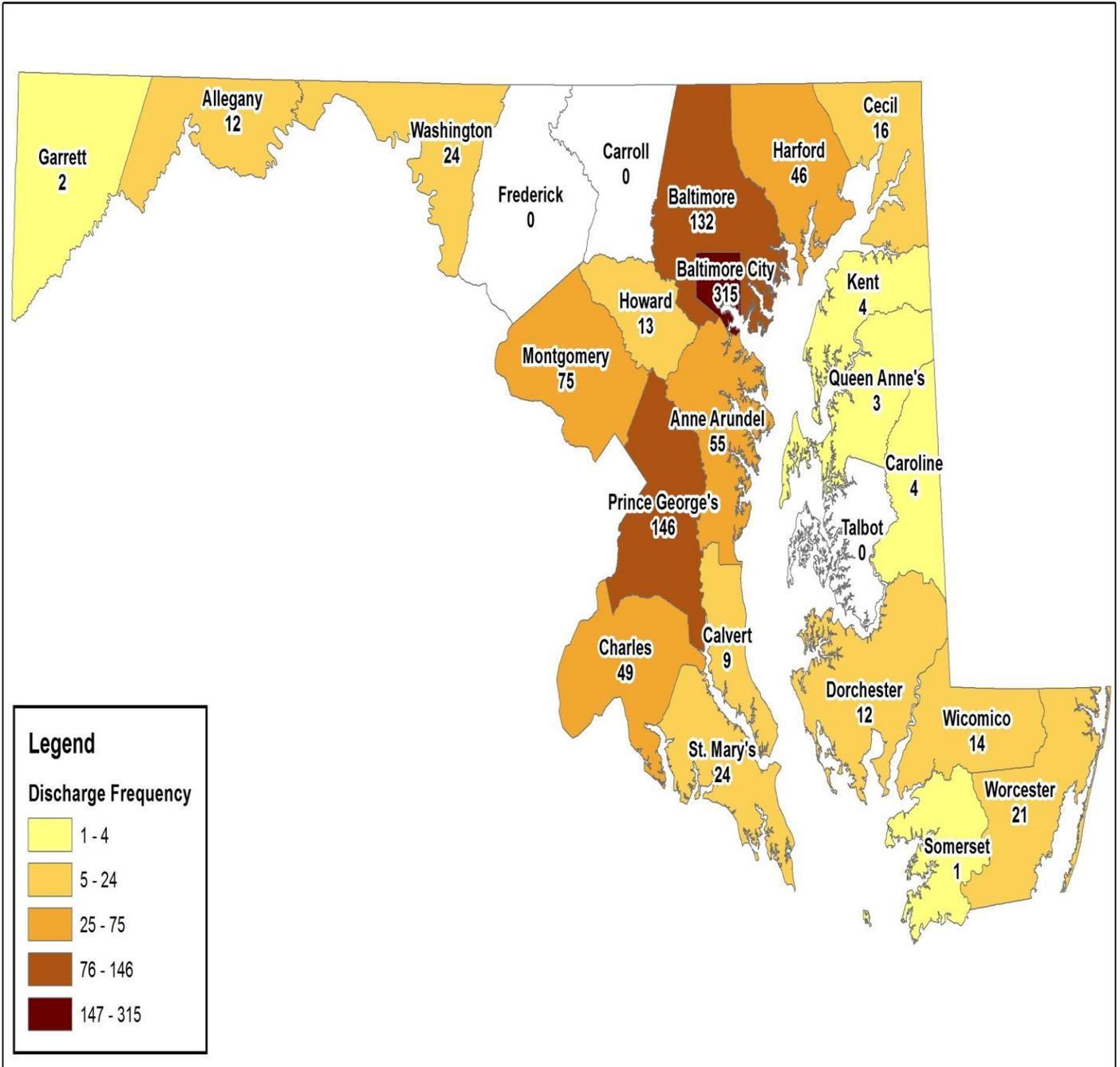
### ***Location of ECD Discharge***

The two maps below depict the location of each ECD discharge by the county and zip code respectively. At least one ECD discharge was reported in every county except Carroll, Frederick and Talbot County. The majority, over 76.0% (n=736) were in the Metro Region<sup>2</sup>. The number of ECD discharges per zip code ranged from 1 to 34 in 2014.

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<sup>2</sup> The "Metro" area is defined by the following counties in Maryland: Anne Arundel, Baltimore, Howard, Prince George's, and Montgomery Counties as well as Baltimore City.

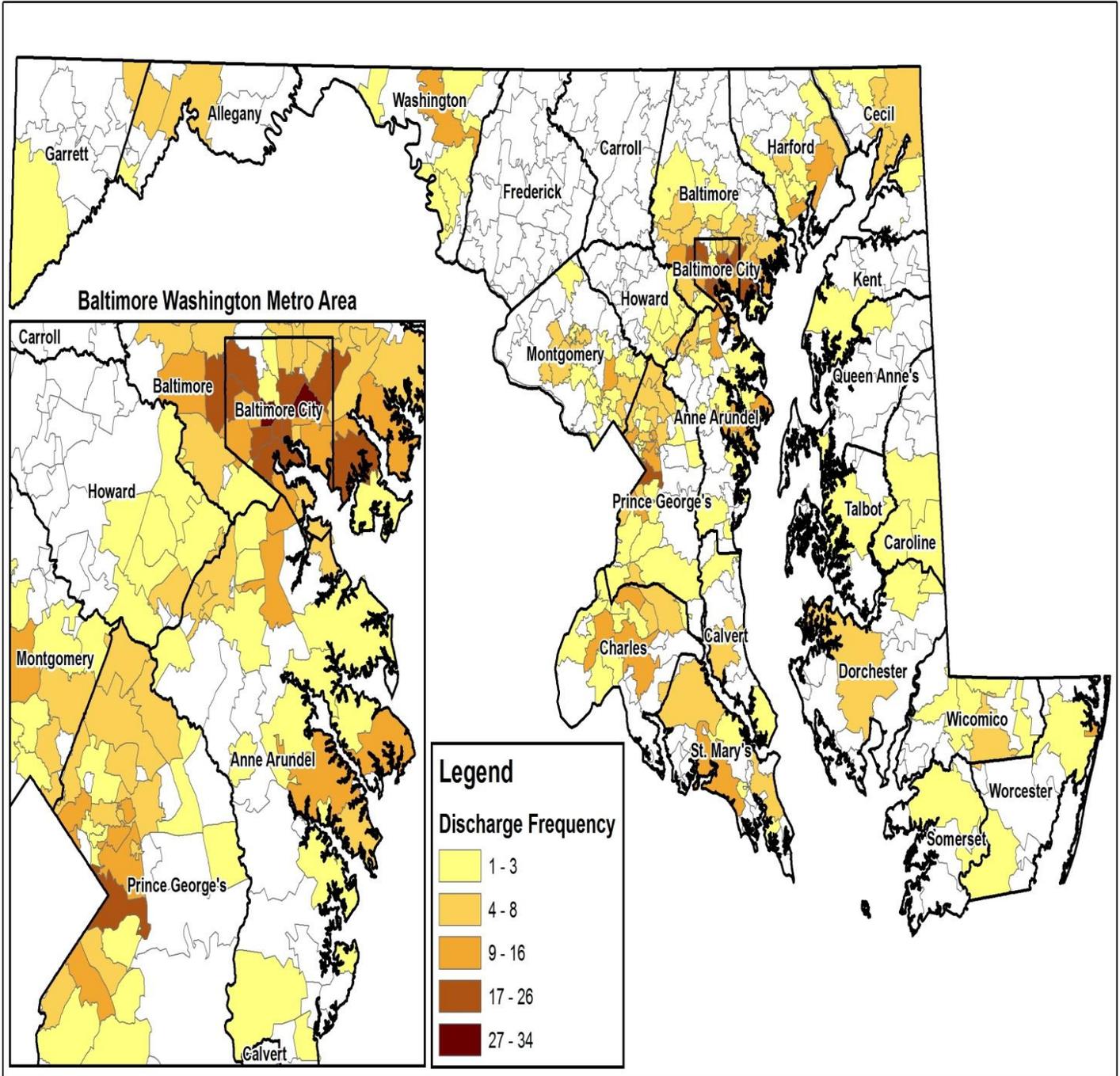
## Law Enforcement Electronic Control Device Discharges aimed at Human Targets in 2014 by County



Source: Governor's Office of Crime Control and Prevention  
Map Created: August 2015



# Law Enforcement Electronic Control Device Discharges aimed at Human Targets in 2014 by Zip Code

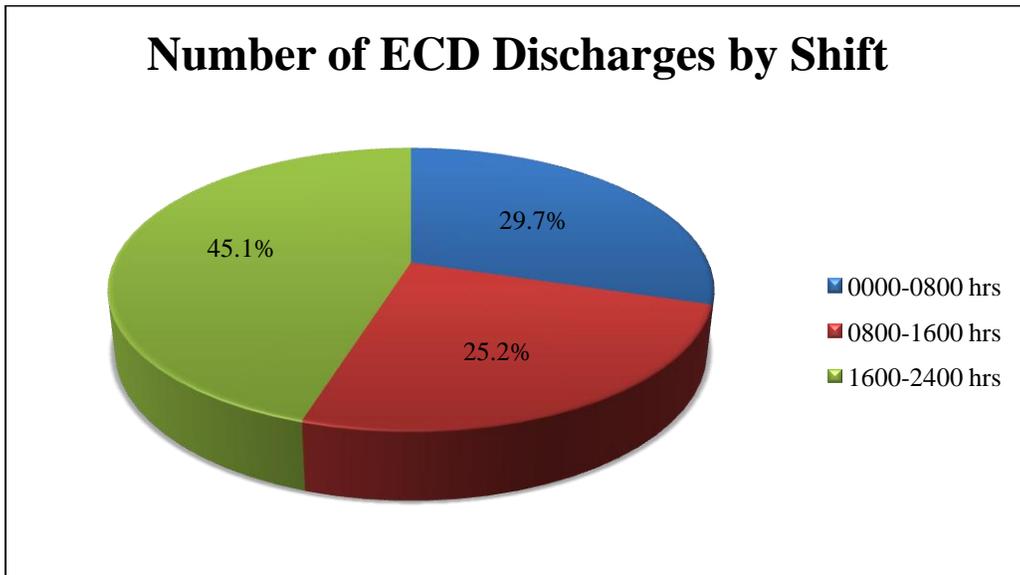
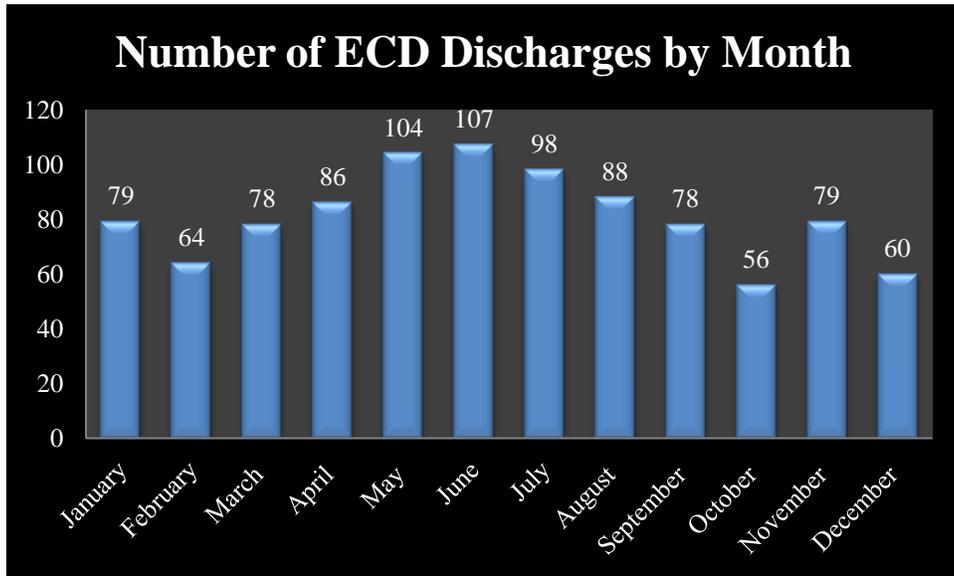


Source: Governor's Office of Crime Control and Prevention  
 Map Created: August 2015



***ECD Discharge Date and Time of Day***

The number of ECD discharges ranged from 56 discharges in October to 107 discharges in June. ECD discharges were more likely to occur in the evening from 1600 hours to 2400 hours (4 pm-12 am), (45.1%, n=430), followed by 0000 hours to 0800 hours (12 am-8 am), (29.7%, n=283), and 0800 hours to 1600 hours (8 am- 4 pm), (25.2%, n=240).



**Race**

Of the people tased by law enforcement agencies in 2013, approximately 95% were African American or Caucasian (68.9% and 26.0% respectively). Data reported to MSAC included all ECD discharges per device. Therefore, it is possible for one person to have been tased multiple times during an incident. This would be captured as a separate ECD discharge incident in the analysis. This could result in the potential duplication of some race, gender, and age frequencies.

<b>Table 2. Number of ECD Discharges by Race/Ethnicity (n=977)</b>			
<b>Race/Ethnicity</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
Asian	2	0.2%	0.2%
African American	673	68.9%	69.1%
Hispanic	32	3.3%	72.2%
Caucasian	254	26.0%	29.3%
Other/Unknown	16	1.6%	27.6%
<b>Total</b>	<b>977</b>	<b>100.0%</b>	<b>100.0%</b>

**Gender**

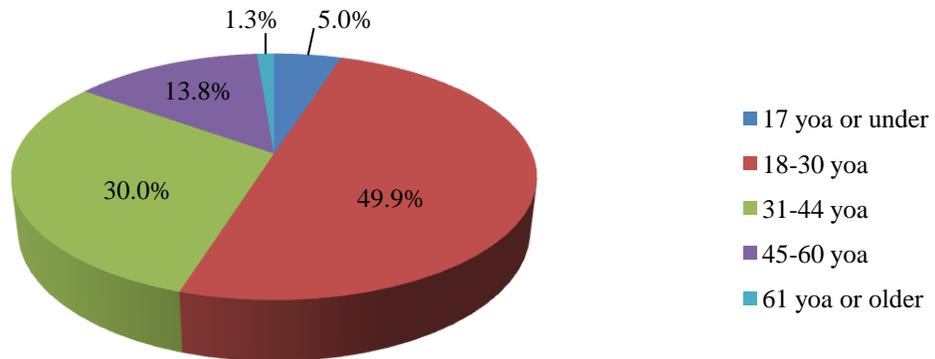
The vast majority (93.1%) of persons targeted with an ECD were male (n=910); females only accounted for 5.7% of persons tased (n=56). Gender information was missing in 11 discharges.

<b>Table 3. Number of ECD Discharges by Gender (n=977)</b>			
<b>Gender</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative percent</b>
Males	910	93.1%	93.4%
Females	56	5.7%	99.5%
Unknown/Missing	11	1.1%	100.0%
<b>Total</b>	<b>977</b>	<b>100.0%</b>	<b>100.0%</b>

**Age**

ECDs were primarily discharged against persons 18-30 years old (49.9%). Juveniles and persons 61 years or older had the lowest rate of ECD discharges (5.0% and 1.3% respectively.) Missing data for person’s age was apparent in 11 cases.

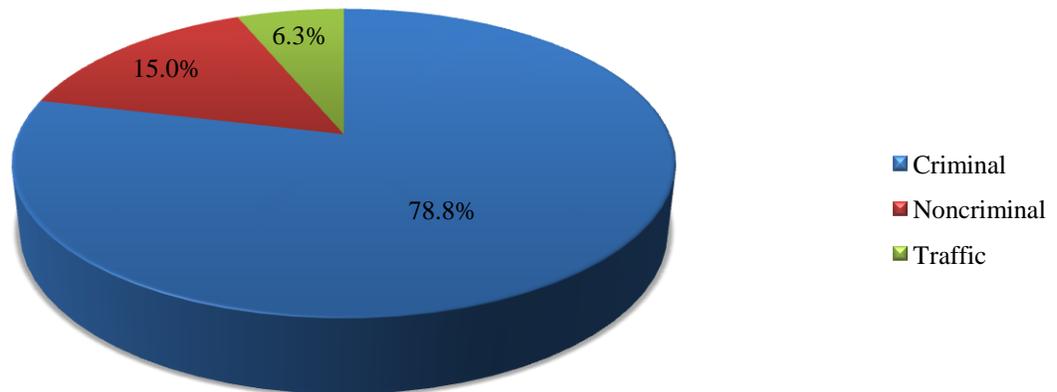
### Number of ECD Discharges by Age Interval Breakdown



### Type of Incident

The type of incident is defined as law enforcement’s initial response to the person against whom the ECD was discharged regardless of the reason for the actual discharge. The types of incidents resulting in an ECD discharge are classified into three different law enforcement responses: criminal, noncriminal, and traffic. Over 75% of ECD discharges in 2014 were in response to criminal incidents (n=768), followed by noncriminal incidents (15.0%, n=146), and during traffic stops (6.1%, n=61).

### Number of ECD Discharges by Incident Type



African Americans (82.8%) were more likely to be tased during response to a criminal incident than Hispanics (68.8%) and Caucasians (72.4%). Hispanics (25.0%) were more likely to be tased in response to a noncriminal incident than any other race/ethnicities. Males (79.8%) were more likely to be tased during law enforcements response to a criminal incident compared to females (73.2%). Juveniles (87.2%) were most likely to be tased in response to a criminal incident and individuals 61 years and older (41.7%) were most likely to be tased in response to a noncriminal incident.

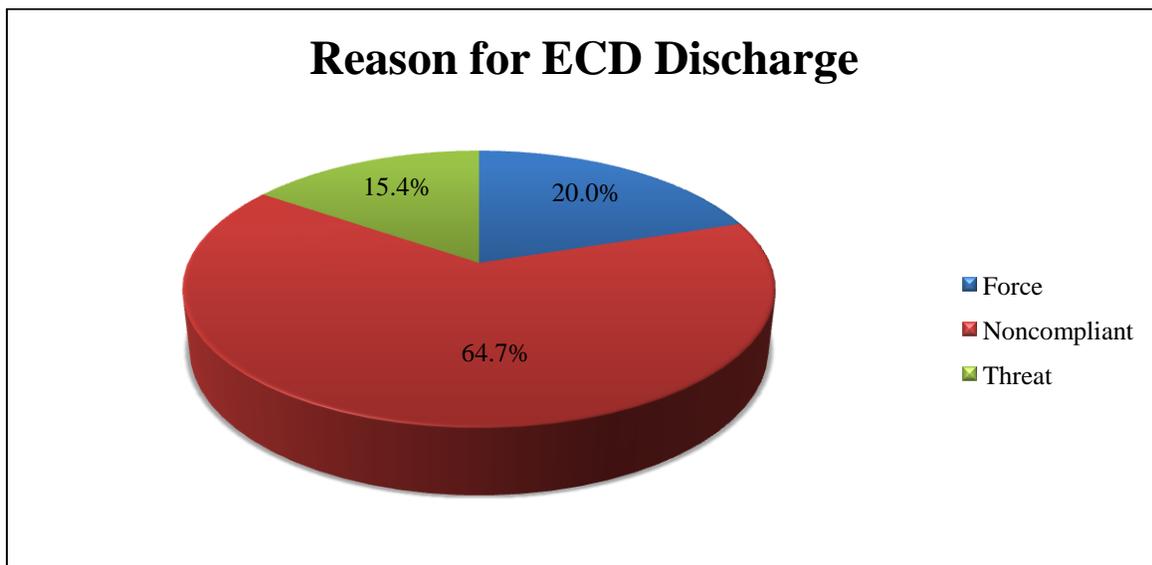
<b>Table 4. Number of ECD Discharges by Type of Incident and Race/Ethnicity (n=977)</b>						
<b>Discharge type</b>	<b>Asian</b>	<b>African American</b>	<b>Hispanic</b>	<b>Caucasian</b>	<b>Unknown/missing</b>	<b>Total</b>
Criminal Percent	0 0.0%	557 82.8%	22 68.8%	174 72.4%	5 31.3%	768 78.6%
Non Criminal Percent	2 100.0%	73 10.8%	8 25.0%	52 20.5%	11 68.8%	146 14.9%
Traffic Percent	0 0.0%	43 6.4%	2 6.3%	16 6.3%	0 0.0%	61 6.2%
Missing Percent	0 0.0%	0 0.0%	0 0.0%	2 0.8%	0 0.0%	2 0.2%
<b>Total Percent</b>	<b>2 100.0%</b>	<b>673 100.0%</b>	<b>32 100.0%</b>	<b>254 99.2%</b>	<b>16 100.0%</b>	<b>977 100.0%</b>

<b>Table 5. Number of ECD Discharges by Type of Incident and Gender (n=977)</b>				
<b>Discharge Type</b>	<b>Male</b>	<b>Female</b>	<b>Missing/Unknown</b>	<b>Total</b>
Criminal Percent	726 79.8%	41 73.2%	1 9.1%	768 78.6%
Noncriminal Percent	123 13.5%	13 23.2%	10 90.9%	146 14.9%
Traffic Percent	59 6.5%	2 3.6%	0 0.0%	61 6.2%
Missing Percent	2 0.2%	0 0.0%	0 0.0%	2 0.2%
<b>Total Percent</b>	<b>910 100.0%</b>	<b>56 100.0%</b>	<b>11 100.0%</b>	<b>977 100.0%</b>

<b>Table 6. Number of ECD Discharges by Type of Incident and Age Interval (n=977)</b>							
<b>Discharge Type</b>	<b>17 &amp; Under</b>	<b>18-30</b>	<b>31-44</b>	<b>45-60</b>	<b>61 &amp; Older</b>	<b>Missing</b>	<b>Total</b>
Criminal Percent	41 87.2%	395 83.7%	215 75.7%	95 72.5%	6 50.0%	16 51.6%	768 78.5%
Noncriminal Percent	5 10.6%	56 11.9%	42 14.8%	25 19.5%	5 41.7%	13 41.9%	146 15.1%
Traffic Percent	1 2.1%	20 4.2%	26 9.2%	11 8.6%	1 8.3%	2 6.5%	61 6.3%
Missing Percent	0 0.0%	1 0.0%	1 0.0%	0 0.0%	0 0.0%	0 0.0%	2 0.0%
<b>Total Percent</b>	<b>47 100.0%</b>	<b>472 100.0%</b>	<b>284 100.0%</b>	<b>131 100.0%</b>	<b>12 100.0%</b>	<b>31 100.0%</b>	<b>977 100.0%</b>

***Reason for ECD Discharge***

ECD discharges occurred most often when the target individual was noncompliant (64.7%, n=631), used force (20.0%, n=195), or threatened to use force (15.4%, n=150).



Across all race/ethnicities, the most common reason for being tased was noncompliance. Hispanics (25.0%) were more likely to be tased for use of force than any other race. Females (33.9%) were more likely to be tased for use of force than males (19.1%). Males (65.7%) were more likely to be tased for being noncompliant than females (53.6%). Juveniles were most likely to be tased for being noncompliant (78.7%) than any other age group. Adults 61 years and older were more likely to be tased for using force (33.3%) and for using a threat (25.0%) than any other age group.

**Table 7. Reason for ECD Discharges by Type and Race/Ethnicity (n=977)**

<b>Discharge Reason</b>	<b>Asian</b>	<b>African American</b>	<b>Hispanic</b>	<b>Caucasian</b>	<b>Unknown/Missing</b>	<b>Total</b>
Force Percent	0 0.0%	121 18.0%	8 25.0%	63 24.8%	3 18.8%	195 25.1%
Noncompliant Percent	2 100.0%	469 69.7%	15 46.9%	141 55.5%	4 25.0%	631 64.6%
Threat Percent	0 0.0%	83 12.4%	9 28.1%	50 19.7%	8 50.0%	150 19.8%
Missing Percent	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 6.3%	1 0.3%
<b>Total Percent</b>	<b>2 100.0%</b>	<b>673 100.0%</b>	<b>32 100.0%</b>	<b>254 100.0%</b>	<b>16 100.0%</b>	<b>977 100.0%</b>

**Table 8. Reason for ECD Discharges by Type and Gender (n=977)**

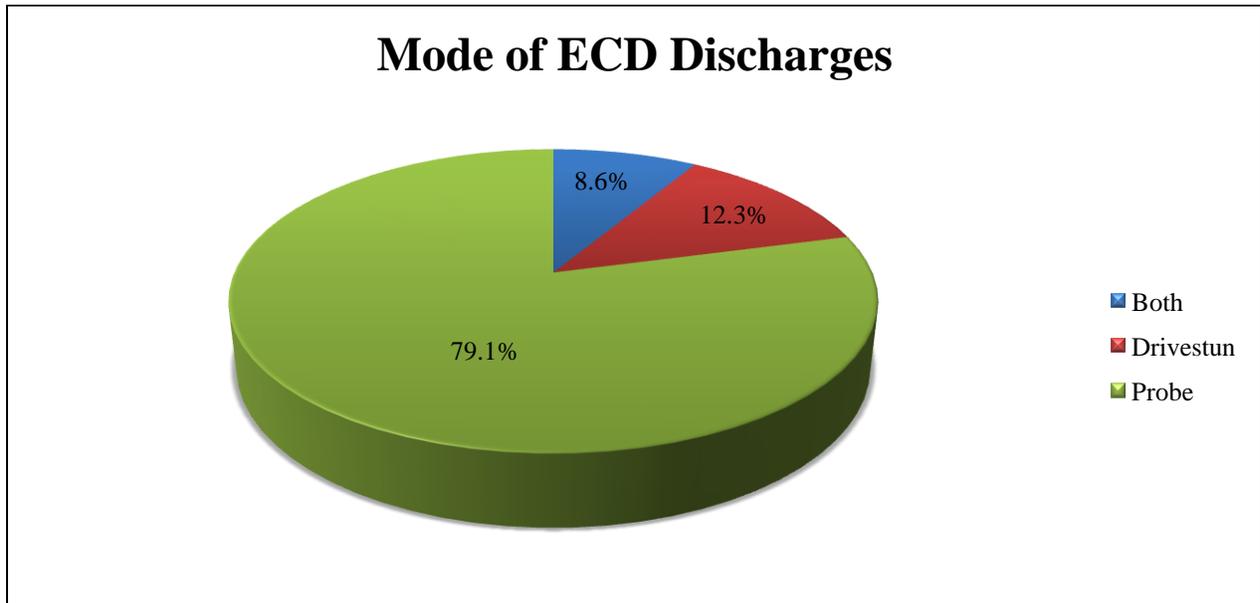
<b>Discharge Reason</b>	<b>Male</b>	<b>Female</b>	<b>Unknown/Missing</b>	<b>Total</b>
Force Percent	174 19.1%	19 33.9%	2 18.2%	195 20.1%
Noncompliant Percent	598 65.7%	30 53.6%	3 27.3%	631 64.6%
Threat Percent	134 15.2%	7 12.5%	5 45.5%	150 15.4%
Missing Percent	0 0.0%	0 0.0%	1 9.1%	1 0.1%
<b>Total Percent</b>	<b>910 100.0%</b>	<b>56 100.0%</b>	<b>11 100.0%</b>	<b>977 100.0%</b>

**Table 9. Reason for ECD Discharges by Type and Age Interval (n=977)**

<b>Discharge Reason</b>	<b>17 &amp; Under</b>	<b>18-30</b>	<b>31-44</b>	<b>45-60</b>	<b>61 &amp; Older</b>	<b>Missing</b>	<b>Total</b>
Force Percent	7 14.9%	100 21.2%	52 18.3%	28 21.9%	4 33.3%	4 12.9%	195 20.1%
Noncompliant Percent	37 78.7%	309 65.5%	184 64.8%	78 59.5%	5 41.7%	18 58.1%	631 64.6%
Threat Percent	3 6.4%	63 13.3%	48 16.9%	25 19.1%	3 25.0%	8 25.8%	150 15.4%
Missing Percent	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 3.2%	1 0.1%
<b>Total Percent</b>	<b>47 100.0%</b>	<b>472 100.0%</b>	<b>284 100.0%</b>	<b>131 100.0%</b>	<b>12 100.0%</b>	<b>31 100.0%</b>	<b>977 100.0%</b>

### ***Mode of ECD Discharge***

An ECD discharge can result from various modes: probe mode, drive stun mode, or both. Probe mode occurs when two probes are fired from a disposable cartridge releasing electrical pulses to the body. This includes any third point of contact. The purpose for this mode is incapacitation by transmitting an electrical current to the central nervous system. Drive stun mode occurs when an ECD is applied directly to the body but does not include a third point of contact discharge. This mode is based on pain and compliance. Probe mode was used more frequently (79.1%, n=761) than drive stun (12.3%, n=118), or both (8.6%, n=82). Missing data was apparent in 15 cases.



Probe mode was the most frequency mode of discharge across all race and ethnicities (50.0% for Asians, 80.5% for African Americans, 68.8% for Hispanics, and 71.8% for Caucasians) and gender (77.6% for males and 80.4% for females). Similarly, probe mode was the primary mode of discharge across all age groups (87.2% for 17 and under, 78.0% for 18-30, 74.6% for 31-44, 78.9% for 45-60, and 75.0% for 61 years and older).

<b>Table 10. Mode of ECD Discharge by Type and Race/Ethnicity (n=977)</b>						
<b>Mode of Discharge</b>	<b>Asian</b>	<b>African American</b>	<b>Hispanic</b>	<b>Caucasian</b>	<b>Missing/unknown</b>	<b>Total</b>
Both Percent	1 50.0%	50 7.4%	1 3.1%	31 12.2%	0 0.0%	83 8.5%
Drive Stun Percent	0 0.0%	70 10.4%	8 25.0%	39 15.4%	1 6.3%	118 12.1%
Probe Percent	1 50.0%	542 80.5%	22 68.8%	181 71.3%	15 93.8%	761 77.9%
Missing Percent	0 0.0%	11 1.6%	1 3.1%	3 1.2%	0 0.0%	15 1.5%
<b>Total Percent</b>	<b>2 100.0%</b>	<b>673 100.0%</b>	<b>32 100.0%</b>	<b>254 100.0%</b>	<b>16 100.0%</b>	<b>977 100.0%</b>

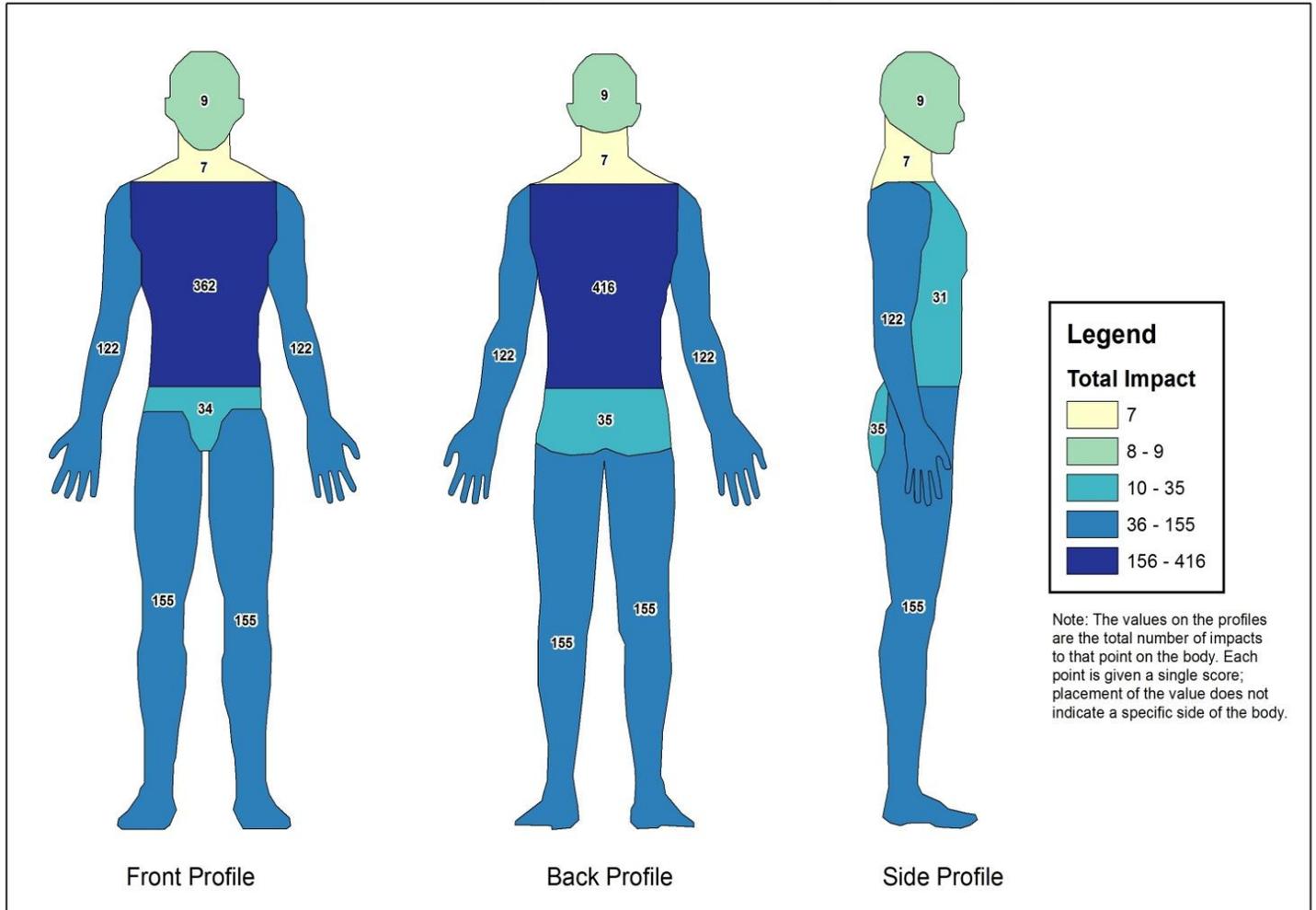
<b>Table 11. Mode of Discharge by type Gender (n=977)</b>				
<b>Mode of Discharge</b>	<b>Male</b>	<b>Female</b>	<b>Missing/unknown</b>	<b>Total</b>
Both Percent	81 8.9%	2 3.6%	0 0.0%	83 8.5%
Drive Stun Percent	109 12.0%	9 16.1%	0 0.0%	118 12.1%
Probe Percent	705 77.5%	45 80.4%	11 100.0%	761 77.9%
Missing/Unknown Percent	15 1.7%	0 0.0%	0 0.0%	15 1.5%
<b>Total Percent</b>	<b>910 100.0%</b>	<b>56 100.0%</b>	<b>11 100.0%</b>	<b>977 100.0%</b>

<b>Table 12. Mode of Discharge by Type and Age Stratification (n=977)</b>							
<b>Mode of Discharge</b>	<b>17 &amp; Under</b>	<b>18-30</b>	<b>31-44</b>	<b>45-60</b>	<b>61 &amp; Older</b>	<b>Missing/unknown</b>	<b>Total</b>
Both Percent	1 2.1%	42 9.0%	26 9.2%	12 9.4%	1 8.3%	0 0.0%	82 8.5%
Drive Stun Percent	3 6.4%	56 11.9%	40 14.1%	14 10.9%	2 16.7%	1 3.2%	116 12.0%
Probe Percent	41 87.2%	366 78.0%	211 74.6%	101 78.9%	9 75.0%	29 93.5%	757 78.0%
Missing/Unknown Percent	2 4.3%	5 1.1%	6 2.1%	1 0.8%	0 0.0%	1 3.2%	15 1.5%
<b>Total Percent</b>	<b>47 100.0%</b>	<b>469 100.0%</b>	<b>283 100.0%</b>	<b>128 100.0%</b>	<b>12 100.0%</b>	<b>31 100.0%</b>	<b>977 100.0%</b>

**Point of Impact**

The point of impact includes seven parts of the body (i.e., arm, back torso, buttocks, front torso, groin/hip, head, leg, neck, and side), as well as clothing or a missed impact. Similarly, when an ECD discharge misses its intended target, this is considered to be a missed “point of contact.” Also, the total “points of impact” do not equal the total number of ECD discharges because some incidents involved multiple points of impact. Approximately 92.7% of all discharges resulted in at least one point of impact (n =1,171, excluding clothing and misses) which totaled 1,263 points of impact (*points of impact are based on exact location of the impact; please see Table 13 for more information*). Approximately 65.0% of discharges hit the intended target in the front torso (30.9%, n = 362) or the back torso (35.5%, n =416). Points of impact in the more sensitive areas of the body (e.g., head, neck, and groin) occurred in approximately 4.0% of all discharges.

Law Enforcement Electronic Control Device Discharges aimed at Human Targets in 2014: Count by Point of Impact



Source: Governor’s Office of Crime Control and Prevention  
Washington College GIS  
August 2015



**Table 13. ECD Points of Contact**

<b>Point of Impact</b>	<b>Point of Impact 1</b>	<b>Point of Impact 2</b>	<b>Point of Impact 3</b>	<b>Total</b>	<b>Percent</b>
Arm	82	39	1	122	10.4%
Back Torso	366	45	5	413	35.5%
Buttocks	17	13	5	35	3.0%
Front Torso	302	55	5	358	30.9%
Groin/Hip	20	12	2	34	2.9%
Head	6	3	0	9	0.8%
Leg	68	78	9	155	13.2%
Neck	4	3	0	7	0.6%
Side	23	6	2	31	2.6%
<b>Discharges with a point of impact</b>	<b>888</b>	<b>254</b>	<b>29</b>	<b>1,164</b>	<b>100.0%</b>
Miss	88	3	0	90	7.2%
Clothing	1	0	0	1	0.1%
<b>Total Discharges</b>	<b>977</b>	<b>256</b>	<b>29</b>	<b>1,263</b>	<b>100.0%</b>

### *ECD Cycles*

Three variables were captured to measure ECD cycles. The first variable measured the number of ECD cycles used per discharging incident. For example, every recorded ECD cycle was analyzed by MSAC to capture the duration of each cycle in seconds. If there were multiple cycles in an ECD discharge, the length (in seconds) between cycles was also captured. The only ECD brand used by law enforcement agencies in Maryland is Taser International Inc. which provides records for every discharge including the cycle information used in this analysis. The number of ECD cycles per discharge ranged from 1 to 12 (mean = 1.62 cycles, median = 1.17 cycles), and the duration of each cycle ranged from 0 to 179 seconds (mean = 4.91 seconds, median = 5 seconds). The standard ECD cycle from a Taser International Inc. device occurs for five seconds when the trigger is pressed. Therefore, in order to increase the duration of an ECD cycle, a manual override would need to occur to lengthen or shorten the duration. The duration between cycles ranged from 0 seconds to 429 seconds, excluding outliers of 776 and 1,022 seconds (mean = 6.46 seconds median = 4.21 seconds).

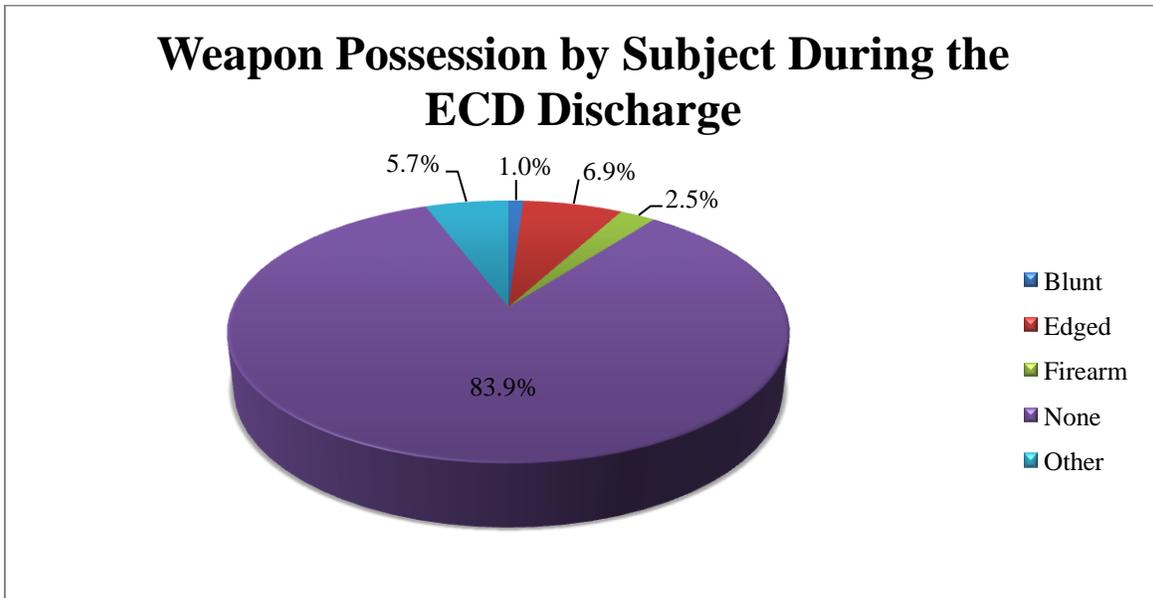
Statistics indicated that there was no significant difference in the number of cycles, duration of cycles, or duration between cycles when cross tabbed by race. Males and females also had similar statistics for number of ECD cycles and duration of ECD cycle. Additionally, the duration between ECD cycles varied across age groups with individuals 18-30 years (mean=3.91) being tased on average for a shorter period of time and individuals 61 and older (9.45) being tased for a longer period of time.

**Table 14. Number, Duration, and Duration Between Cycles by Race, Gender, and Age Grouping**

<b>ECD Data Distribution</b>	<b>Mean and Median</b>	<b>Number of ECD Cycles</b>	<b>Duration of ECD Cycles (in seconds)</b>	<b>Duration between ECD Cycles (in seconds)</b>
<b>RACE</b>				
<b>Asian</b>	Mean	1.5	5	n/a
n = 2	Median	1.5	5	n/a
<b>African American</b>	Mean	1.45	4.71	5.4
n = 673	Median	1	5	5
<b>Hispanic</b>	Mean	1.77	5.42	6
n = 32	Median	1	5	5
<b>Caucasian</b>	Mean	1.72	4.58	4.43
n = 254	Median	1	5	5
<b>Unknown/Missing</b>	Mean	1.22	10.22	0.75
n = 16	Median	1	5	0
<b>GENDER</b>				
<b>Female</b>	Mean	1.64	3.7	15.5
n = 56	Median	1	5	5
<b>Male</b>	Mean	1.88	3.57	6.98
n = 910	Median	1	5	5
<b>Unknown/Missing</b>	Mean	1.07	5	12.3
n = 11	Median	1	5	5
<b>AGE GROUPING</b>				
<b>17 &amp; Under</b>	Mean	1.32	4.45	7
n = 47	Median	1	5	6
<b>18-30</b>	Mean	1.69	4.53	3.91
n = 472	Median	1	5	5
<b>31-44</b>	Mean	1.8	4.49	9
n = 284	Median	4.51	5	4
<b>45-60</b>	Mean	1.98	3.26	6.59
n = 131	Median	1	5	3
<b>61 &amp; Older</b>	Mean	2.27	4.91	9.45
n = 12	Median	1	5	5
<b>Unknown/Missing</b>	Mean	1.38	4.85	3.18
n = 31	Median	1	5	6
<b>Combined Total</b>	<b>Mean</b>	<b>1.62</b>	<b>4.91</b>	<b>6.46</b>
<b>n = 977</b>	<b>Median</b>	<b>1.17</b>	<b>5</b>	<b>4.21</b>

### ***Weapon Possession***

Possession of a weapon was included in the analysis of this report to capture the type of weapon (if any) that was on the person being tased at the time of the incident. Of the total number of ECD discharges (n=977), the target individual possessed a weapon approximately 16.0% of the time. If a weapon was possessed, the most common type was edged weapon (6.9%, n=67), other weapon (5.7%, n=56), firearms (2.5%, n=24), and blunt force weapons (1.0%, n=10). Missing data was apparent in three cases.



Hispanics (21.9%) were more likely to possess a weapon than Caucasians (19.7%) and African Americans (14.5%). Edged weapon was the most common weapon possessed across races. Females (35.7%) were significantly more likely to possess a weapon than males (14.7%). With regards to age, individuals 61 years and older were more likely to possess a weapon when tased (41.7%).

**Table 15. Weapon Possession at the Time of ECD Discharge by Race/Ethnicity (n=977)**

<b>Weapon Possessed</b>	<b>Asian</b>	<b>African American</b>	<b>Hispanic</b>	<b>Caucasian</b>	<b>Unknown</b>	<b>Total</b>
Blunt Percent	0 0.0%	5 0.7%	0 0.0%	5 2.0%	0 0.0%	10 1.0%
Edged Percent	0 0.0%	34 5.1%	6 18.8%	27 10.6%	0 0.0%	67 6.9%
Firearm Percent	0 0.0%	24 3.6%	0 0.0%	0 0.0%	0 0.0%	24 2.5%
None Percent	2 100.0%	574 85.3%	25 78.1%	204 80.3%	12 75.0%	817 83.6%
Other Percent	0 0.0%	34 5.1%	1 3.1%	18 7.1%	3 18.8%	56 5.7%
Missing Percent	0 0.0%	2 0.3%	0 0.0%	0 0.0%	1 6.3%	3 0.3%
<b>Total Percent</b>	<b>2 100.0%</b>	<b>673 100.0%</b>	<b>32 100.0%</b>	<b>254 100.0%</b>	<b>16 100.0%</b>	<b>977 100.0%</b>

**Table 16. Weapon Possession at the Time of ECD Discharge by Gender (n=977)**

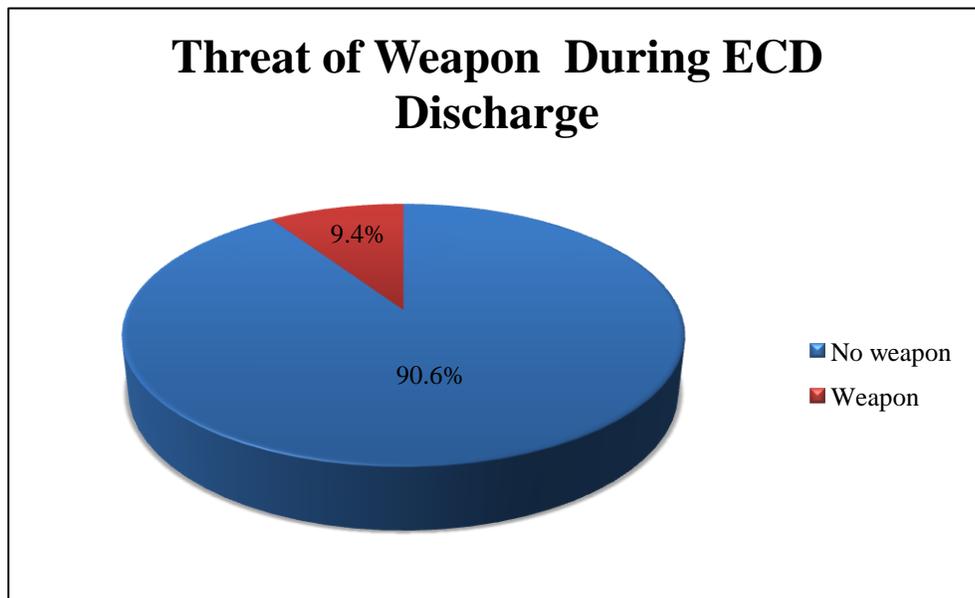
<b>Weapon Possessed</b>	<b>Male</b>	<b>Female</b>	<b>Missing</b>	<b>Total</b>
Blunt Percent	8 0.9%	2 3.6%	0 0.0%	10 1.0%
Edged Percent	53 5.8%	14 25.0%	0 0.0%	67 6.9%
Firearm Percent	24 2.6%	0 0.0%	0 0.0%	24 2.5%
None Percent	774 85.1%	36 64.3%	7 63.6%	817 83.6%
Other Percent	49 5.4%	4 7.1%	3 27.3%	56 5.7%
Missing Percent	2 0.2%	0 0.0%	1 9.1%	3 0.3%
<b>Total Percent</b>	<b>910 100.0%</b>	<b>56 100.0%</b>	<b>11 90.9%</b>	<b>977 100.0%</b>

**Table 17. Weapon Possession at the Time of ECD Discharge by Age Stratification (n=977)**

<b>Weapon Possessed</b>	<b>17 &amp; Under</b>	<b>18-30</b>	<b>31-44</b>	<b>45-60</b>	<b>61 &amp; Older</b>	<b>Missing</b>	<b>Total</b>
Blunt Percent	0 0.0%	4 0.8%	3 1.1%	3 2.3%	0 0.0%	0 0.0%	10 1.0%
Edged Percent	5 10.6%	24 5.1%	22 7.7%	13 9.9%	3 25.0%	0 0.0%	67 6.7%
Firearm Percent	1 2.1%	16 3.4%	3 1.1%	3 2.3%	0 0.0%	1 3.2%	24 2.5%
None Percent	41 87.2%	402 85.2%	238 83.8%	105 80.2%	7 58.3%	24 77.4%	817 83.9%
Other Percent	0 0.0%	25 5.3%	18 6.3%	7 5.3%	2 16.7%	4 12.9%	54 5.6%
Missing percent	0 0.0%	1 0.2%	0 0.0%	0 0.0%	0 0.0%	2 6.5%	3 0.3%
<b>Total Percent</b>	<b>47 100.0%</b>	<b>472 99.8%</b>	<b>284 100.0%</b>	<b>131 100.0%</b>	<b>12 100.0%</b>	<b>31 93.5%</b>	<b>977 100.0%</b>

***Threat of Weapon***

Of ECD discharges where no weapon was present, MSAC analyzed whether a threat of a weapon occurred. Law enforcement may assume a threat exists based on verbal threat or other indication, based on a person’s actions (e.g. does not remove hands from pockets). Of the 817 ECD discharge incidents where a weapon was not possessed, a threat of a weapon only occurred during 9.1% of those incidents (n=74).



A threat of a weapon was more likely to occur for Hispanics (21.7%) compared to African Americans and Caucasians (9.6% and 7.7% respectively). Males (9.9%) were more likely to threaten the use of a weapon than females (2.8%). Individuals 31-44 years old (8.5%) were the least likely to show a threat of a weapon during an ECD discharge; whereas, individuals who 61 years and older (28.6%) were more likely to show a threat of a weapon during an ECD discharge incident.

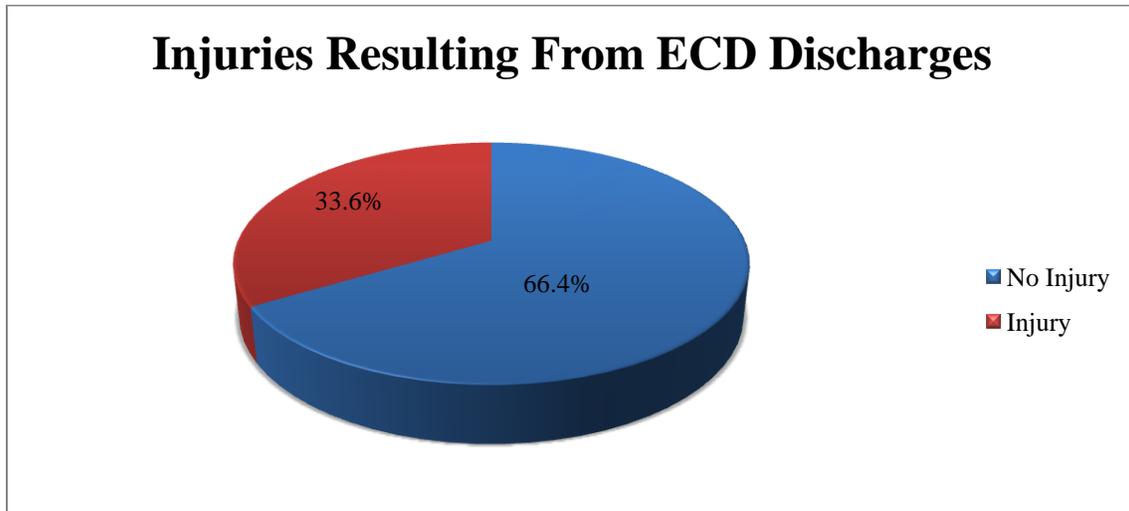
<b>Table 18. Threat of a weapon during ECD Discharges by Race/Ethnicity (n=919)</b>						
<b>Threat of a weapon During ECD Discharge</b>	<b>Asian</b>	<b>African American</b>	<b>Hispanic</b>	<b>Caucasian</b>	<b>Missing/Unknown</b>	<b>Total</b>
Yes Percent	0 0.0%	54 9.6%	5 21.7%	15 7.7%	1 2.8%	75 9.2%
No Percent	2 100.0%	507 90.4%	18 78.3%	180 92.3%	35 97.2%	742 90.8%
<b>Total Percent</b>	<b>2 100.0%</b>	<b>561 100.0%</b>	<b>30 100.0%</b>	<b>195 100.0%</b>	<b>36 100.0%</b>	<b>817 100.0%</b>

<b>Table 19. Threat of a Weapon During ECD Discharges by Gender (n=919)</b>				
<b>Threat of a weapon During ECD Discharge</b>	<b>Male</b>	<b>Female</b>	<b>Missing/Unknown</b>	<b>Total</b>
Yes Percent	74 9.9%	1 2.8%	0 0.0%	75 9.2%
No Percent	676 90.1%	35 97.2%	31 100.0%	742 90.8%
<b>Total Percent</b>	<b>750 100.0%</b>	<b>36 100.0%</b>	<b>7 100.0%</b>	<b>817 100.0%</b>

<b>Table 20. Threat of Weapon During ECD Discharge by Age (n=919)</b>							
<b>Threat of a weapon During ECD Discharge</b>	<b>17 &amp; Under</b>	<b>18-30</b>	<b>31-44</b>	<b>45-60</b>	<b>61 &amp; Older</b>	<b>Missing/Unknown</b>	<b>Total</b>
Yes Percent	4 10.0%	40 10.5%	20 8.5%	9 8.7%	2 28.6%	0 0.0%	75 9.2%
No Percent	36 90.0%	342 89.5%	216 91.5%	95 91.3%	5 71.4%	48 100.0%	742 90.8%
<b>Total Percent</b>	<b>43 100.0%</b>	<b>382 100.0%</b>	<b>236 100.0%</b>	<b>104 100.0%</b>	<b>7 100.0%</b>	<b>48 100.0%</b>	<b>817 100.0%</b>

**Death and Injuries**

Death and Injuries resulting from an ECD discharge exclude deaths or injuries from punctures or lacerations caused by ECD contact or the removal of ECD probes. One death occurred from a direct result of an ECD discharge in 2014. Injuries were reported in approximately 33.6%



Hispanics (46.9%) were more likely to sustain an injury as a result of being tased than any other race. Females (41.1%) were slightly more likely to sustain injuries than males (33.4%). Juveniles were most likely to be injured as a result of being tased than any other age group (44.7%).

<b>Table 21. Injuries Reported From an ECD Discharge by Race/Ethnicity (n=977)</b>						
<b>Injuries</b>	<b>Asian</b>	<b>African American</b>	<b>Hispanic</b>	<b>Caucasian</b>	<b>Missing/Unknown</b>	<b>Total</b>
Yes	0	235	15	75	2	327
Percent	0.0%	35.0%	46.9%	29.5%	12.5%	33.5%
No	2	437	17	176	13	647
Percent	100.0%	64.9%	53.1%	70.1%	81.3%	66.2%
Missing	0	1	0	1	1	3
Percent	0.0%	0.1%	0.0%	0.4%	6.3%	0.3%
<b>Total</b>	<b>2</b>	<b>673</b>	<b>32</b>	<b>254</b>	<b>16</b>	<b>977</b>
<b>Percent</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

**Table 22. Injuries Reported from an ECD Discharge by Gender (n=977)**

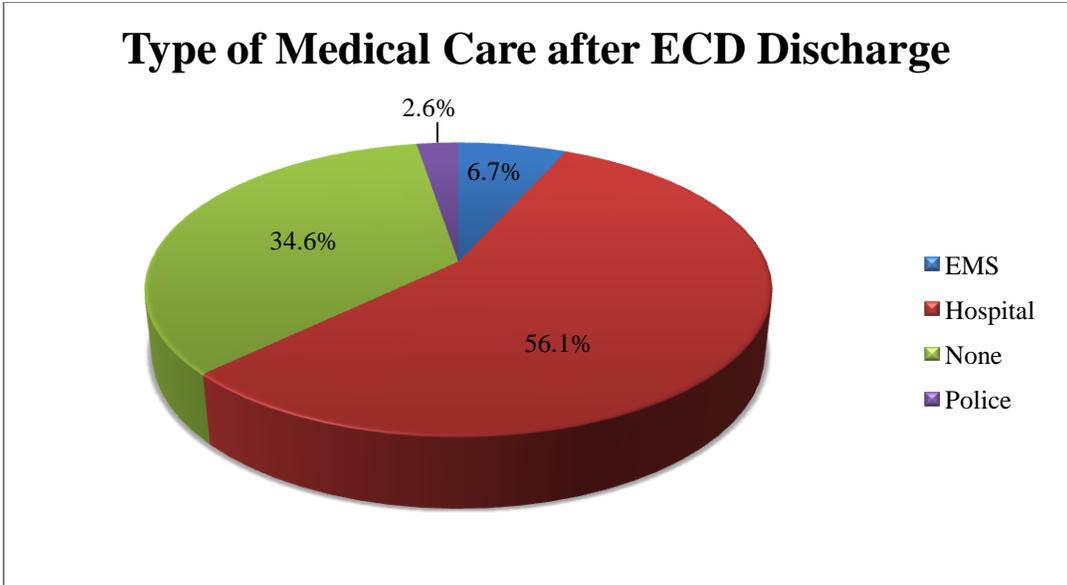
<b>Injuries</b>	<b>Male</b>	<b>Female</b>	<b>Missing/Unknown</b>	<b>Total</b>
Yes	304	23	0	327
Percent	33.4%	41.1%	0.0%	33.5%
No	604	33	10	647
Percent	66.4%	58.9%	90.9%	66.2%
Missing percent	2	0	1	3
	0.2%	0.0%	9.1%	0.3%
<b>Total</b>	<b>910</b>	<b>56</b>	<b>11</b>	<b>977</b>
<b>Percent</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

**Table 23. Injuries Reported from an ECD Discharge by Age Stratification (n=977)**

<b>Injuries</b>	<b>17 &amp; Under</b>	<b>18-30</b>	<b>31-44</b>	<b>45-60</b>	<b>61 &amp; Older</b>	<b>Missing/Unknown</b>	<b>Total</b>
Yes	21	178	86	41	1	0	327
Percent	44.7%	37.7%	30.3%	31.3%	8.3%	0.0%	33.5%
No	26	293	198	90	11	29	647
Percent	55.3%	62.1%	69.7%	68.7%	91.7%	93.5%	66.2%
Missing Percent	0	1	0	0	0	2	3
	0.0%	0.2%	0.0%	0.0%	0.0%	6.5%	0.3%
<b>Total</b>	<b>47</b>	<b>472</b>	<b>284</b>	<b>131</b>	<b>12</b>	<b>31</b>	<b>977</b>
<b>Percent</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

### *Medical Care*

The type of medical care needed for individuals who were tased was analyzed for this report. This excludes medical care resulting from treatment of punctures or lacerations caused by ECD contact or the removal of ECD probes. Results indicate that individuals who were tased received hospital care 56.1% of the time, followed by no medical care (34.6%); EMS care (6.7%) and police care (2.6%). However, these percentages may not represent an accurate portrayal of medical care provided because this was not consistently reported by all agencies, using the given definition. Some agencies included hospital care for all discharges regardless of whether additional treatment beyond the standard procedure to treat puncture or lacerations occurred. Given this observation, MSAC is not confident that the medical care data provided by law enforcement accurately captures the ECD discharge incidents where additional medical care was provided.



**DISCUSSION AND RECOMMENDATIONS**

This report provides an overview of law enforcement ECD discharges in the State of Maryland for calendar year 2014. ECD discharges were most likely to occur in densely populated areas between 1600-2400 hours. The majority of discharges occurred during law enforcement’s initial response to a criminal incident and when a person failed to comply with law enforcement officer orders. Probe mode was most commonly used during an ECD discharge in which a person’s center mass (i.e., front and back torso) were the most frequent a point of impact. There were very few ECD discharges that made contact with the head, neck, and groin (the more sensitive areas of the body). On average, an ECD discharge incident only involved one five second cycle. Persons who were tased possessed a weapon approximately 16% of the time and showed a threat of a weapon approximately 18% of the time. One death occurred as a result of an ECD discharge in 2014. Injuries resulting from an ECD discharge occurred in approximately 1/3 of the incidents. Approximately 65% of the person’s that were tased received additional medical care.

Approximately 95% of the individuals who were tased were African American or Caucasian. Overall, African Americans were more likely to be tased during law enforcement’s initial response to a criminal incident, and were more likely to be noncompliant than Caucasians. Caucasians were tased more often during a response to a noncriminal incident and were more likely to have used, or threatened to use force on law enforcement officers. A weapon was possessed more often during ECD discharge incidents by Caucasians who were also more likely to pose the threat of a weapon, compared to African American’s. There were no significant differences in the type of mode used, point of impact, or frequency of injuries among the two races.

Males accounted for approximately 95% of persons who were tased. Males were more likely to be tased during an initial response to a criminal incident and were more likely to be noncompliant. Females were more likely to use force and possess a weapon than males when they were tased. Probe mode was the most frequent mode of discharge for both males and females. There were no significant differences in the point of impact, or frequency of injuries by gender.

Approximately 80% of people tased were between the ages of 18 and 44. Generally, juveniles were tased more often during law enforcement's initial response to a criminal incident, as well as for being noncompliant. Middle aged men and women were most likely to use a threat while being tased. Probe mode was the consistent mode of discharge across all age groups. Injuries and point of impact were fairly consistent across all age groups.

Data regarding threat of a weapon, injury, or fatality were reported to MSAC in a format consisting of "yes" or "no." Law enforcement was not required to report the situation or reason surrounding these occurrences. One limitation pertaining to the current study resulted from agency responses to "medical care". Some agencies selected hospital care for all discharges regardless of whether additional treatment beyond the standard procedure to treat puncture or lacerations occurred. As a result, data pertaining to the frequency of additional medical care received appears to be inflated. For incidents in which a weapon was possessed, it was unclear whether law enforcement saw a weapon on an individual prior to discharging an ECD, or located it after the fact.