TENTH REPORT TO THE STATE OF MARYLAND UNDER TR 25-113

2012 Race-Based Traffic Stop Data Analysis

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

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INTRODUCTION

In 2001, the Maryland General Assembly passed TR 25-113. The statute, which requires data collection on every law eligible traffic stop in Maryland, aims to provide information about the pervasiveness of racial profiling.[1] Specifically, TR 25-113 required the Maryland Police and Correctional Training Commission (PCTC), in consultation with the Maryland Justice Analysis Center,[2] to develop four guiding documents, to include:

1. A model recording and reporting format (*please see Appendix A for more information*);
2. A model policy for law enforcement agencies to address race/ethnicity-based traffic stops (*please see Appendix B for more information*);
3. Guidelines for law enforcement agencies to manage, counsel, and train officers who collect traffic stop data (*please see Appendix C for more information*); and
4. A model log for law enforcement agencies to record traffic stop data.

TR 25-113 mandates State funding for data collection and analysis however, neither law enforcement agencies nor the Maryland Statistical Analysis Center (MSAC) received funding for traffic stop data reporting.

METHODOLOGY

The 2013 report presents aggregate data on all law eligible stops in Maryland that law enforcement agencies reported to the MSAC for the 2012 calendar year (January 1, 2012 through December 31, 2012). Departments submitted their data for the reference period to MSAC at the Governor's Office of Crime Control and Prevention (GOCCP). The original data was submitted in Microsoft Excel or Microsoft Access and subsequently merged, standardized, and analyzed using IBM SPSS (Statistical Package for the Social Sciences) Statistics version 21.0 to formulate this report. IBM SPSS Statistics version 21.0 is a system package widely accepted and used by researchers and social scientists.

For the current reporting period, 130 agencies were required to report, and 117 departments are included in the current analysis (n = 896,138 traffic stops); the majority of agencies that were not included in the analyses reported to GOCCP but had no measureable data during this time period. The units of analysis for this report consist of all law eligible traffic stops that occurred under Maryland jurisdiction between January 1, 2012 and December 31, 2012. To that end, *law eligible traffic stops* are defined as all stops made by law enforcement agencies that have the authority to issue traffic violations. TR 25-113

[1] By definition, racial profiling refers to the practice of constructing a set of characteristics or behaviors based on race and using that set of characteristics to decide whether an individual might be guilty of some crime.

[2] The Maryland Justice Analysis Center at the University of Maryland hosted the Maryland Statistical Analysis Center through 2006. Then in 2007, the Governor's Office of Crime Control and Prevention incorporated this center under Executive Order 01.01.2007.05.

excludes traffic stops that result from checkpoints or roadblocks, stops of multiple vehicles after an accident or emergency, the use of radar, laser, vascar technology, and license plate readers. Such stops are excluded because officer discretion is unlikely to play a role and therefore any differences observed between races and minority populations would not be the result of systematic differences in treatment due to race/ethnicity.

The relevant information from departments included:

- Demographic information on the driver
- Vehicle registration information
- Reason for the stop
- Reason for the search, if one was conducted
- Type of search
- Outcome of the search
- Overall outcome of the traffic stop

The demographic information of the driver in the traffic stop was determined using the officer's observations and in some cases supplemented with information from Maryland's Motor Vehicle Administration (MVA) at the time of the traffic stop. This information included gender, age, and race/ethnicity. For the purposes of this report, race/ethnicity was coded into 5 categories: Caucasian, African American, Asian, Hispanic, and Other. *Caucasian* refers to individuals that were reported by officers and/or the MVA as White, Arab, Caucasian, and Asiatic Islander. The *Other* category is comprised of multiple race/ethnicities that cannot be disaggregated due to the categorical disparities between MVA ethnic data and law enforcement ethnic data under TR 25-113.[3] To this end, the results of this report refer to the statute's guidelines for reporting race/ethnicity and race/ethnicities reported for traffic stops that do not correspond to one of the five categories were coded as *Other*.

Registration information was measured as a dichotomous variable reflecting whether or not the vehicle was registered within the state. The initial reason for the traffic stop was provided and classified according to the Annotated Code of Maryland Transportation Article. Search information includes the reason for the search, the type of search, and the disposition of the search if applicable. Reasons for the search include consensual, incident to arrest, exigent circumstances, probable cause, K-9 Alert, and other. The *Other* category reflects all searches conducted by law enforcement officers that were not classified into one of the other five categories. The types of searches conducted include searches of the person, searches of the vehicle and/or its contents, or both. Search disposition was collapsed into the following categories: property, contraband, both, or nothing. Finally, the outcome of the traffic stop was

[3] The statute requires the use of the following categories: Asian, Black, White, Hispanic and Other. However, the MVA utilizes the following categories: Black or African American, White, Asian, Native Hawaiian or Other Pacific Islander, American Indian, and Other.

measured using four possible categories including warning (i.e., both verbal and written), citation, Safety Equipment Repair Order (SERO), and arrest. The categories of this variable are mutually exclusive and were coded to reflect the most severe outcome of the traffic stop. Therefore, if the traffic stop resulted in both a citation and an arrest, only arrest was coded. If an arrest occurred, the reason for the arrest was to be recorded (based on the search, based on the stop, or other).

RESULTS

Between January 1, 2012 and December 31, 2012, Maryland police departments and sheriffs' offices reported **896,138** law eligible traffic stops. **Table 1** displays the overall breakdown of the race/ethnicity of drivers involved in traffic stops. Information on race/ethnicity was missing in 705 cases, and race/ethnicity could not be correctly classified in 5,735 traffic stops. As illustrated below, the majority of drivers who were stopped during a traffic stop were Caucasian (48.6%) followed by African Americans at 39.3%.

Table 1. Race/Ethnicity of Driver in Traffic Stops

	Frequency	Percent	Cumulative Percent
Asian	22179	2.5%	2.6%
African American	351823	39.3%	41.7%
Hispanic	57039	6.4%	48.1%
Other	23302	2.6%	50.7%
Caucasian	435355	48.6%	99.3%
Unknown	5735	0.6%	99.9%
Missing	705	0.0%	100.0%
Total	**896138**	**100.0%**	

Table 2 displays the breakdown of the gender for all drivers involved in traffic stops. Male drivers (63.5%) were stopped more frequently than female drivers (34.9%). Unknown/missing gender data was found in 14,273 traffic stops (1.6%).

Table 2. Gender of Driver in Traffic Stops

	Frequency	Percent	Cumulative Percent
Males	569079	63.5%	63.5%
Females	312786	34.9%	98.4%
Unknown/Missing	14273	1.6%	100.0%
Total	**896138**	**100.0%**	

Tables 3 and 4 display the initial reason for the traffic stop provided by the officer and stratified by the driver's race/ethnicity, for males and females respectively; totals do not equal all traffic stops due to missing gender data in 14,273 cases and missing stop reason data in 12,623 cases. A stop reason was not specified in 8,412 stops of male drivers and 4,206 stops of female drivers. Overall, patterns were similar across race/ethnicity and gender with comparable frequencies for the primary initial stop reason. Caucasian and African American males were stopped most frequently for a violation of Title 22 (26.7%, and 23.5% respectively). African American males were stopped most frequently for a violation of Title 13 (20.3%), compared to Caucasian (16.7%), Other Non-Caucasian (16.0%), Hispanic (14.3%), and Asian males (13.6%). Asian males were most likely to be stopped for a moving violation (13.4%) compared to Other Non-Caucasians (12.9%), Caucasians (10.7%), Hispanics (8.6%), and African Americans (8.1%). Males of every race/ethnicity were least likely to be stopped for a violation of Title 21 Subtitle 13 and Title 21 Subtitle 14 which was comprised of less than 0.4% of stops for each race/ethnicity.

Of all races/ethnicities, Caucasian females (22.9%) were stopped more frequently for a violation of Title 22 than Hispanic (22.7%), African Americans (21.8%), and Other Non-Caucasian and Asian females (19.2% to 16.5%); however, African American females were stopped most frequently for a violation of Title 13 (22.8%). Asian females were stopped more frequently for a moving violation (13.1%) followed by Other Non-Caucasians (12.7%), Caucasians (11.2%), Hispanics (8.9%), and African Americans (8.3%). All females were least likely to be stopped for a violation of Title 21 Subtitle 13 and Title 21 Subtitle 14 (less than 0.2% for each race/ethnicity).[4]

[4] Title 13: Registration
Title 21.11: Miscellaneous rules
Title 21.13: Operation of motorcycles
Title 21.14: Operation of vehicles on certain toll facilities
Title 21.2: Traffic signs, signals, and markings
Title 21.3: Driving on right side of roadway, overtaking and passing
Title 21.4: Right of way
Title 21.6: Turning and starting, signals and stopping
Title 21.7: Special stops required
Title 21.8: Speed restrictions
Title 21.9: Reckless, negligent or driving, fleeing, and eluding
Title 22: Equipment of vehicles
Title 24: Size, weight, and load

Table 3. Primary Initial Reason for Stop by Driver's Race/Ethnicity and Gender (Males)							
Stop Reason	**Asian**	**African American**	**Hispanic**	**Other**	**Caucasian**	**Unknown/ Missing**	**Total**
13	**1887**	**43290**	**6093**	**2577**	**45991**	**110**	**99948**
Percent	**13.6%**	**20.3%**	**14.3%**	**16.0%**	**16.7%**	**4.5%**	17.8%
21.11	191	3664	971	328	5507	19	**10680**
Percent	1.4%	1.7%	2.3%	2.0%	2.0%	0.8%	1.9%
21.13	6	142	36	10	353	0	**547**
Percent	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%
21.14	23	473	101	57	868	0	**1522**
Percent	0.2%	0.2%	0.2%	0.4%	0.3%	0.0%	0.3%
21.2	**2255**	**18535**	**5905**	**2313**	**27691**	**79**	**56778**
Percent	**16.3%**	**8.7%**	**13.8%**	**14.4%**	**10.2%**	**3.2%**	10.1%
21.3	852	9213	2531	1078	14236	38	**27948**
Percent	6.2%	4.3%	5.9%	6.7%	5.2%	1.6%	5.0%
21.4	354	2879	850	368	6354	20	**10825**
Percent	2.6%	1.4%	2.0%	2.3%	2.3%	0.8%	1.9%
21.6	101	1595	327	119	1888	7	**4037**
Percent	0.7%	0.7%	0.8%	0.7%	0.7%	0.3%	0.7%
21.7	1182	8608	2458	907	14955	38	**28148**
Percent	8.5%	4.0%	5.8%	5.6%	5.5%	1.6%	5.0%
21.8	**1851**	**17285**	**3681**	**2078**	**29190**	**107**	**54192**
Percent	**13.4%**	**8.1%**	**8.6%**	**12.9%**	**10.7%**	**4.4%**	9.7%
21.9	180	2242	835	225	4960	17	**8459**
Percent	1.3%	1.1%	2.0%	1.4%	1.8%	0.7%	1.5%
22	**2818**	**50098**	**9923**	**3511**	**72774**	**101**	**139225**
Percent	**20.4%**	**23.5%**	**23.2%**	**21.8%**	**26.7%**	**4.1%**	24.8%
24	21	518	164	27	676	3	**1409**
Percent	0.2%	0.2%	0.4%	0.2%	0.2%	0.1%	0.3%
Other	2124	54419	8852	2498	47160	1896	**116949**
Percent	15.3%	25.6%	20.7%	15.5%	17.3%	77.9%	20.9%
Total	**13845**	**212961**	**42727**	**16096**	**272603**	**2435**	**560667**
Percent	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Table 4. Primary Initial Reason for Stop by Driver's Race/Ethnicity and Gender (Females)							
Stop Reason	**Asian**	**African American**	**Hispanic**	**Other**	**Caucasian**	**Unknown/ Missing**	**Total**
13	**1009**	**28767**	**1726**	**1092**	**27659**	**52**	**60305**
Percent	**13.9%**	**22.8%**	**14.1%**	**17.8%**	**17.8%**	**5.3%**	19.5%
21.11	107	1629	223	61	2607	2	**4629**
Percent	1.5%	1.3%	1.8%	1.0%	1.7%	0.2%	1.5%
21.13	2	7	0	2	24	0	**35**
Percent	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21.14	9	194	11	16	356	0	**586**
Percent	0.1%	0.2%	0.1%	0.3%	0.2%	0.0%	0.2%
21.2	**1363**	**11575**	**1980**	**982**	**16886**	**29**	**32815**
Percent	**18.6%**	**9.2%**	**16.2%**	**16.0%**	**10.8%**	**3.0%**	10.6%
21.3	420	4939	592	315	7872	19	**14157**
Percent	5.7%	3.9%	4.8%	5.1%	5.1%	1.9%	4.6%
21.4	229	1979	286	190	4415	8	**7107**
Percent	3.1%	1.6%	2.3%	3.1%	2.8%	0.8%	2.3%
21.6	54	847	66	48	1085	5	**2105**
Percent	0.7%	0.7%	0.5%	0.8%	0.7%	0.5%	0.7%
21.7	833	6299	990	447	11377	19	**19965**
Percent	11.4%	5.0%	8.1%	7.3%	7.3%	1.9%	6.5%
21.8	**960**	**10421**	**1091**	**779**	**17412**	**43**	**30706**
Percent	**13.1%**	**8.3%**	**8.9%**	**12.7%**	**11.2%**	**4.4%**	10.0%
21.9	82	852	127	63	2061	6	**3191**
Percent	1.1%	0.7%	1.0%	1.0%	1.3%	0.6%	1.0%
22	**1206**	**27522**	**2777**	**1176**	**35707**	**24**	**68412**
Percent	**16.5%**	**21.8%**	**22.7%**	**19.2%**	**22.9%**	**2.5%**	22.2%
24	1	115	8	1	60	0	**185**
Percent	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.1%
Other	1047	30976	2383	954	28251	642	**64382**
Percent	14.3%	24.6%	19.4%	15.6%	18.1%	78.2%	20.9%
Total	**7322**	**126122**	**12260**	**6126**	**155772**	**978**	**308580**
Percent	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

The registration of the vehicle stopped (i.e., in-state or out-of-state), stratified by the race/ethnicity of the driver is displayed in **Tables 5 and 6**, for males and females respectively. The totals do not equal all traffic stops due to missing gender information (n = 14,273). The majority of registrations, for male and female drivers of all races/ethnicities, were in-state at the time of the stop (84.9% and 88.5% respectively).

Table 5. Vehicle Registration by Driver's Race/Ethnicity (Males) n = 569079							
Registration	**Asian**	**African American**	**Hispanic**	**Other**	**Caucasian**	**Unknown/ Missing**	**Total**
In-State	12060	187352	37886	12848	230804	2285	**483235**
Percent	83.6%	86.7%	86.2%	77.8%	83.7%	93.8%	84.9%
Out-of-State	2367	28584	6080	3664	44843	148	**85686**
Percent	16.4%	13.2%	13.8%	22.2%	16.3%	6.1%	15.1%
Unknown/Missing	1	92	8	3	51	3	**158**
Percent	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
Total	**14428**	**216028**	**43974**	**16515**	**275698**	**2436**	**569079**
Percent	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

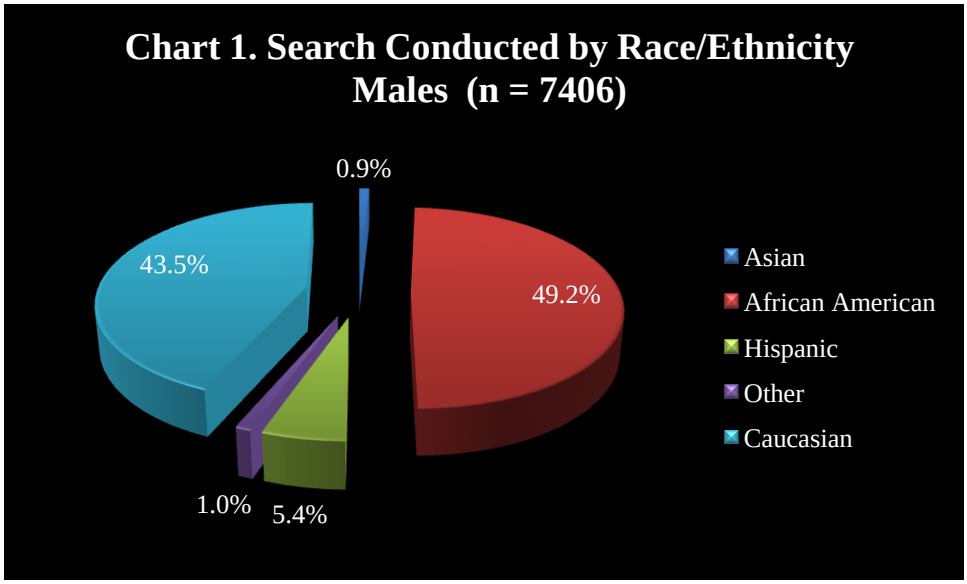
Table 6. Vehicle Registration by Driver's Race/Ethnicity (Females) n = 312786							
Registration	**Asian**	**African American**	**Hispanic**	**Other**	**Caucasian**	**Unknown/ Missing**	**Total**
In-State	6739	113837	11436	5394	138555	934	**276895**
Percent	88.4%	89.1%	89.8%	86.2%	88.0%	95.4%	88.5%
Out-of-State	886	13858	1300	867	18890	43	**35844**
Percent	11.6%	10.9%	10.2%	13.8%	12.0%	4.4%	11.5%
Unknown/Missing	2	27	1	0	15	2	**47**
Percent	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%
Total	**7627**	**127722**	**12737**	**6261**	**157460**	**979**	**312786**
Percent	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Tables 7 and 8 display the breakdown of the total number of searches conducted which was stratified by the race/ethnicity of the driver. There were 9,211 conducted searches with a valid search type, representing only 1.0% of all traffic stops. Totals do not equal all traffic stops due to missing gender data in 20 searches. Males were more than twice as likely to be searched compared to females (1.3% versus 0.6%). Males and females were searched at relatively similar rates across race/ethnicity (0.5% - 1.7% for males and 0.1% - 0.6% for females).

Table 7. Search conducted by Race/Ethnicity (Males) n = 569079							
Search Conducted	**Asian**	**African American**	**Hispanic**	**Other**	**Caucasian**	**Unknown/ Missing**	**Total**
Yes	66	3644	399	75	3222	26	**7432**
Percent	0.5%	1.7%	0.9%	0.5%	1.2%	1.1%	1.3%
No/incomplete data	14362	212384	43575	16440	272476	2410	**561647**
Percent	99.5%	98.3%	99.1%	99.5%	98.8%	98.9%	98.7%
Total	**14428**	**216028**	**43974**	**16515**	**275698**	**2436**	**569079**
Percent	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Table 8. Search conducted by Race/Ethnicity (Females) n = 312786							
Search Conducted	**Asian**	**African American**	**Hispanic**	**Other**	**Caucasian**	**Unknown/ Missing**	**Total**
Yes	9	760	32	12	940	6	**1759**
Percent	0.1%	0.6%	0.3%	0.2%	0.6%	0.6%	0.6%
No/incomplete data	7618	126962	12705	6249	156520	973	**311027**
Percent	99.9%	99.4 %	99.7%	99.8%	99.4%	99.4%	99.4%
Total	**7627**	**127722**	**12737**	**6261**	**157460**	**979**	**312786**
Percent	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

The data presented in **Chart 1** below demonstrates that the vast majority of male drivers who were searched during a traffic stop (where a race/ethnicity was reported) were African American or Caucasian (49.2% and 43.5% respectively), followed by Hispanic (5.4%), Other Non-Caucasian (1.0%), and Asian (0.9%).



As illustrated below in **Chart 2**, most female drivers who were searched (where a race/ethnicity was reported) were Caucasian or African American (53.6% and 43.4% respectively). Hispanic, Asian, and Other Non-Caucasian females represented only 3% of all searches conducted on female drivers.

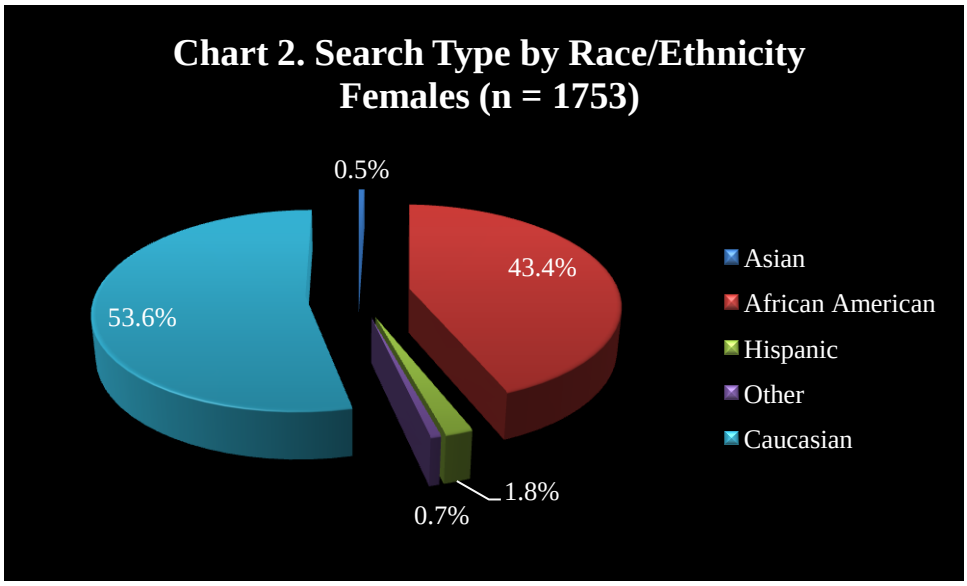


Table 9 and 10 displays the types of searches conducted (i.e., person or property) with regards to the race/ethnicity of the driver and disaggregated by gender. The majority of searches for males and females, of all races/ethnicities, consisted of both person and property (65.1 – 72.2% for males and 56.3% - 77.8% for females). Other Non-Caucasian males were less likely than other races/ethnicities to have only their person searched (16.0%) compared to African Americans (16.5%), Caucasians (18.0%), Hispanics (21.1%), and Asians (25.8%). Similarly, Other Non-Caucasian males were more likely than other races/ethnicities to have their property searched (18.7%) compared to African Americans (15.9%), Hispanics (11.8%), Caucasians (9.9%), and Asians (9.1%). If a search was conducted for both person and property, it often occurred for Caucasian males (72.2%) and Asian females (77.8%).

Table 9. Type of Search Conducted by Driver's Race/Ethnicity and Gender (Males) n = 7432

Search Type	Asian	African American	Hispanic	Other	Caucasian	Unknown/ Missing	Total
Person	17	600	84	12	579	4	**1296**
Percent	25.8%	16.5%	21.1%	16.0%	18.0%	15.4%	17.4%
Property	6	578	47	14	318	5	**968**
Percent	9.1%	15.9%	11.8%	18.7%	9.9%	19.2%	13.1%
Both	43	2466	268	49	2325	17	**5168**
Percent	65.1%	67.7%	67.2%	65.3%	72.2%	65.4%	69.5%
Total Searches	**66**	**3644**	**399**	**75**	**3222**	**26**	**7432**
Percent	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Table 10. Type of Search Conducted by Driver's Race/Ethnicity and Gender (Females) n = 1759							
Search Type	**Asian**	**African American**	**Hispanic**	**Other**	**Caucasian**	**Unknown/ Missing**	**Total**
Person	2	116	9	0	127	4	**258**
Percent	22.2%	15.3%	28.1%	0.0%	13.5%	66.7%	14.7%
Property	0	212	5	3	145	1	**366**
Percent	0.0%	27.9%	15.6%	25.0%	15.4%	16.7%	20.8%
Both	7	432	18	9	668	1	**1135**
Percent	77.8%	56.8%	56.3%	75.0%	71.1%	16.7%	64.5%
Total Searches	**9**	**760**	**32**	**12**	**940**	**6**	**1759**
Percent	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Table 11 and 12 display the reason for the search of the driver's person or property, provided by the officer. Totals do not equal all searches due to missing gender data in 20 searches and missing search reason data in 174 searches (1.9% of total searches). Fifty-eight percent of all searches were conducted as a search incident to arrest (SIR), or based upon the driver's consent. The most frequent search reason was search incident to arrest (SIR) for both males (37.2% overall) and females (40.6% overall) across all race/ethnicities. African American males were most likely to give consent to search (22.8%) and least likely to be searched for an incident to arrest. Conversely, Asian males were less likely to give consent (13.6%) which was the second lowest in frequency to Hispanic males (13.2%); however, most likely to be searched for an incident to arrest (63.6%). Caucasian males (20.3%) were more likely than Other Non-Caucasian (18.7%), Asian (13.6%), and Hispanic males (22.8%) to give consent to be searched.

Hispanic females were most likely to provide consent for a search (21.6%) and less likely to be searched for an incident to arrest (51.6%) compared to Asian (77.8%) and Other Non-Caucasian females (63.6%). Asian females were least likely to provide consent for a search (0.0%); however, they were most likely to be searched for an incident to arrest (77.8%).

Exigent circumstances were reported least often for each demographic (0.0% to 1.2%). African Americans males were more likely to be searched due to probable cause (30.4%) compared to Caucasians (22.4%), Other Non-Caucasians (21.3%), Hispanics (20.0%), and Asians (15.2%). African American males and females, and Hispanic males were more likely than other races/ethnicities to have a search reason categorized as "Other".

Table 11. Reason for Search by Driver's Race/Ethnicity (Males) n = 7313							
Reason for Search	**Asian**	**African American**	**Hispanic**	**Other**	**Caucasian**	**Unknown/ Missing**	**Total**
Consensual	9	812	52	14	650	1	**1538**
Percent	13.6%	22.8%	13.2%	18.7%	20.3%	5.6%	21.0%
Exigent Circumstances	0	26	3	0	12	0	**41**
Percent	0.0%	0.7%	0.8%	0.0%	0.4%	0.0%	0.6%
Incident to Arrest	42	1077	204	36	1346	14	**2719**
Percent	63.6%	30.3%	51.6%	48.0%	42.1%	77.8%	37.2%
K-9 Alert	3	227	12	7	364	0	**613**
Percent	4.5%	6.4%	3.0%	9.3%	11.4%	0.0%	8.4%
Other	2	337	45	2	110	0	**496**
Percent	3.0%	9.5%	11.4%	2.7%	3.4%	0.0%	6.8%
Probable Cause	10	1081	79	16	717	3	**1906**
Percent	15.2%	30.4%	20.0%	21.3%	22.4%	16.7%	26.1%
Total Searches	**66**	**3560**	**395**	**75**	**3199**	**18**	**7313**
Percent	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Table 12. Reason for Search by Driver's Race/Ethnicity (Females) n = 1715							
Reason for Search	**Asian**	**African American**	**Hispanic**	**Other**	**Caucasian**	**Unknown/ Missing**	**Total**
Consensual	0	79	7	1	200	0	**287**
Percent	0.0%	10.8%	22.6%	9.1%	21.6%	0.0%	16.7%
Exigent Circumstances	0	9	0	0	1	0	**10**
Percent	0.0%	1.2%	0.0%	0.0%	0.1%	0.0%	0.6%
Incident to Arrest	7	255	16	7	407	5	**697**
Percent	77.8%	34.9%	51.6%	63.6%	43.9%	100.0%	40.6%
K-9 Alert	0	30	0	1	109	0	**140**
Percent	0.0%	4.1%	0.0%	9.1%	11.7%	0.0%	8.2%
Other	0	137	1	0	28	0	**166**
Percent	0.0%	18.7%	3.2%	0.0%	3.0%	0.0%	9.7%
Probable Cause	2	221	7	2	183	0	**415**
Percent	22.2%	30.2%	22.6%	18.2%	19.7%	0.0%	24.2%
Total Searches	**9**	**731**	**31**	**11**	**928**	**5**	**1715**
Percent	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Tables 13 and 14 display the search disposition stratified by race/ethnicity and collapsed across gender. A search disposition was reported in 6,474 traffic stops (70.3% of all searches). Of those searches where a search disposition was included, the majority of males and females had nothing confiscated (60.3%

and 60.8% respectively). Search dispositions were fairly consistent among the different races/ethnicities. Of those searches where a disposition was reported, Asian males were least likely to have contraband, property, or both seized (23.6%) followed by Hispanic (26.2%), Other Non-Caucasian (27.0%), African American (40.3%), and Caucasian males (41.4%). Caucasian males were more likely to have contraband only seized (20.6%); whereas, Hispanic and African American males were more likely to have just property seized (9.6% and 8.9% respectively) when compared with other races/ethnicities. African American males were also most likely to have both contraband and property seized during a search (17.1%) compared with other demographics.

The same trend was not apparent for females. In fact, Hispanics were least likely to have contraband, property, or both seized (20.0%), followed by Asian (22.2%), African American (39.0%), Other Non-Caucasian (40.0%), and Caucasian females (40.1%). Asian females were most likely to have just contraband confiscated (22.2%). Hispanic females had the highest frequency of property confiscation overall (15.0%); whereas, African American (12.7%) and Caucasian (6.8%) females had a lower frequency. Asian and Other Non-Caucasian females had no property discovered during a search.

Table 13. Search Disposition by Driver's Race/Ethnicity (Males)

Search Disposition	**Asian**	**African American**	**Hispanic**	**Other**	**Caucasian**	**Unknown/ Missing**	**Total**
Contraband	5	329	27	9	508	1	**879**
Percent	9.1%	14.2%	10.0%	14.3%	20.6%	4.0%	16.9 %
Property	2	207	26	4	157	1	**397**
Percent	3.6%	8.9%	9.6%	6.3%	6.4%	4.0%	7.6 %
Contraband & Property	6	397	18	4	356	4	**785**
Percent	10.9%	17.1%	6.6%	6.3%	14.4%	16.0%	15.1 %
Nothing	42	1385	200	46	1444	19	**3136**
Percent	76.4%	59.7%	73.8%	73.0%	58.6%	76.0%	60.3%
Total Searches with Disposition Reported	**55**	**2318**	**271**	**63**	**2465**	**25**	**5197**
Percent	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Total Searches with Disposition not Reported	**11**	**1326**	**128**	**12**	**757**	**1**	**2235**
Percent	**16.7%**	**36.4%**	**32.1%**	**16.0%**	**23.5%**	**3.8%**	**30.1%**

Table 14. Search Disposition by Driver's Race/Ethnicity (Females)							
Search Disposition	**Asian**	**African American**	**Hispanic**	**Other**	**Caucasian**	**Unknown/ Missing**	**Total**
Contraband	2	54	0	3	130	0	**189**
Percent	22.2%	11.2%	0.0%	30.0%	17.6%	0.0%	14.9%
Property	0	61	3	0	50	0	**114**
Percent	0.0%	12.7%	15.0%	0.0%	6.8%	0.0%	9.0%
Contraband & Property	0	73	1	1	117	1	**193**
Percent	0.0%	15.1%	5.0%	10.0%	15.8%	20.0%	15.2%
Nothing	7	294	16	6	443	4	**770**
Percent	77.8%	61.0%	80.0%	60.0%	59.9%	80.0%	60.8%
Total Searches with Disposition Reported	**9**	**482**	**20**	**10**	**740**	**5**	**1266**
Percent	**100.0%**	**100.0%**	**100.0%**	**100.0 %**	**100.0%**	**100.0%**	**100.0%**
Total Searches with Disposition not Reported	**0**	**278**	**12**	**2**	**200**	**1**	**493**
Percent	**0.0%**	**36.6%**	**37.5%**	**16.7%**	**21.3%**	**16.7%**	**28.0%**

Tables 15 and 16 specify the outcome of each traffic stop. Missing data was apparent in the outcome of 29,962 (3.3%) traffic stops. Totals do not equal all traffic stops due to missing gender data in 14,273 cases. Males are slightly more likely to receive a citation than females (33.6% compared to 27.5%) and less likely to receive a warning than females (55.8%, compared to 61.6%). Receiving a warning (i.e., written or verbal) was the most common outcome for males including Asians (60.0%), Other Non-Caucasians (59.4%), Caucasians (58.0%), African Americans (54.4%), and Hispanics (47.5%). Hispanic males were more likely to receive a citation (42.8%) followed by Other Non-Caucasian (33.8%), Caucasian (33.4%), Asian (32.4%), and African American males (32.3%). The probability of an arrest ranged from 0.4% for Asian and Other Non-Caucasian males to 1.1% for African American males.

Similar to males, the most common outcome for females was to receive a warning which ranged from 56.1% for Hispanics to 64.3% for Asians. Hispanic females were most likely to receive a citation (34.6%) followed by Other Non Caucasian (31.2%), Asian (29.1%), African American (28.6%), and Caucasian female drivers (26.4%). The probability of an arrest ranged from 0.2% for Asian and Other Non-Caucasian males to 0.6% for Hispanic females.

Table 15. Traffic Stop Outcome by Driver's Race/Ethnicity (Males) n = 569079							
Traffic Stop Outcome	**Asian**	**African American**	**Hispanic**	**Other**	**Caucasian**	**Unknown/ Missing**	**Total**
Arrest	63	2356	461	66	2600	13	**5559**
Percent	0.4%	1.1%	1.0%	0.4%	0.9%	0.5%	1.0%
Citation	4673	69799	18815	5589	91959	298	**191133**
Percent	32.4%	32.3%	42.8%	33.8%	33.4%	12.2%	33.6%
SERO	927	15087	3211	1028	19191	229	**39673**
Percent	6.4%	7.0%	7.3%	6.2%	7.0%	9.4%	7.0%
Warning	8655	117523	20874	9807	159853	1047	**317759**
Percent	60.0%	54.4%	47.5%	59.4%	58.0%	43.0%	55.8%
Unknown/Missing	110	11263	613	25	2095	849	**14955**
Percent	0.8%	5.2%	1.4%	0.2%	0.8%	34.9%	2.6%
Total	**14428**	**216028**	**43974**	**16515**	**275698**	**2436**	**569079**
Percent	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Table 16. Traffic Stop Outcome by Driver's Race/Ethnicity (Females) n = 312786							
Traffic Stop Outcome	**Asian**	**African American**	**Hispanic**	**Other**	**Caucasian**	**Unknown/ Missing**	**Total**
Arrest	12	650	72	15	827	6	**1582**
Percent	0.2%	0.5%	0.6%	0.2%	0.5%	0.6%	0.5%
Citation	2218	35881	4409	1955	41619	83	**86165**
Percent	29.1%	28.1%	34.6%	31.2%	26.4%	8.5%	27.5%
SERO	454	10800	949	404	13123	154	**25884**
Percent	6.0%	8.5%	7.5%	6.5%	8.3%	15.7%	8.3%
Warning	4903	75542	7143	3883	100886	431	**192788**
Percent	64.3%	59.1%	56.1%	62.0%	64.1%	44.0%	61.6%
Unknown/ Missing	40	4849	164	4	1005	305	**6367**
Percent	0.5%	3.8%	1.3%	0.1%	0.6%	31.2%	2.0%
Total	**7627**	**127722**	**12737**	**6261**	**157460**	**979**	**312786**
Percent	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

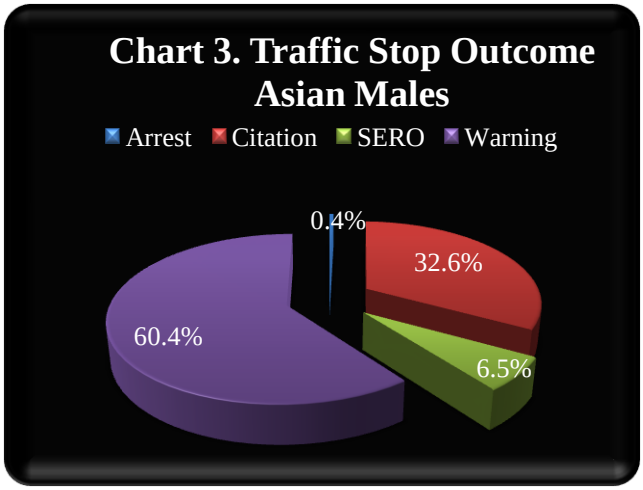


Chart 3. Traffic Stop Outcome
Asian Males
Arrest
Citation
SERO
Warning
0.4%
32.6%
60.4%
6.5%

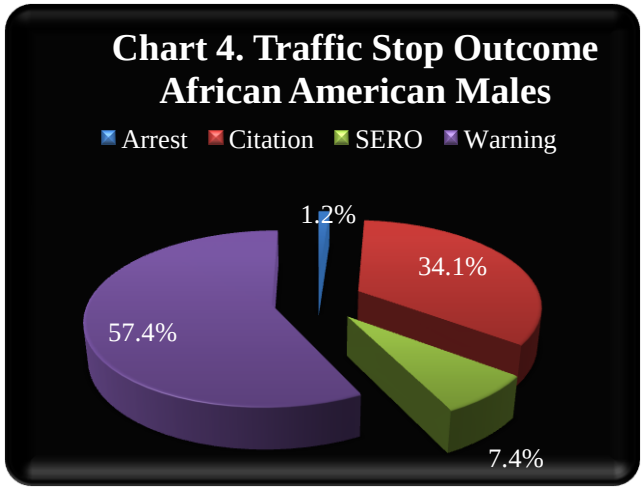


Chart 4. Traffic Stop Outcome
African American Males
Arrest
Citation
SERO
Warning
1.2%
34.1%
57.4%
7.4%

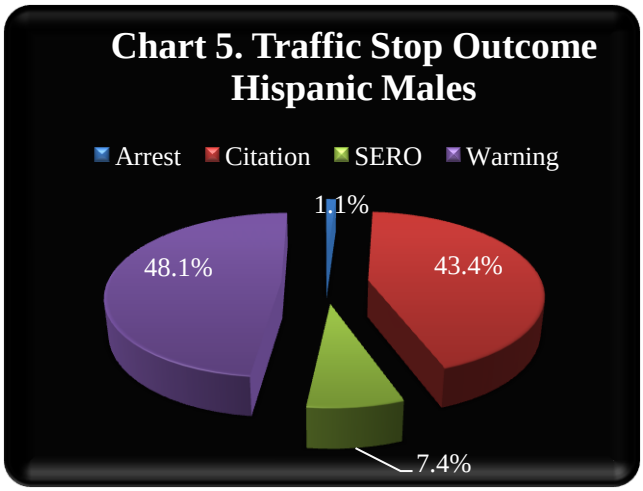


Chart 5. Traffic Stop Outcome
Hispanic Males
Arrest
Citation
SERO
Warning
1.1%
48.1%
43.4%
7.4%

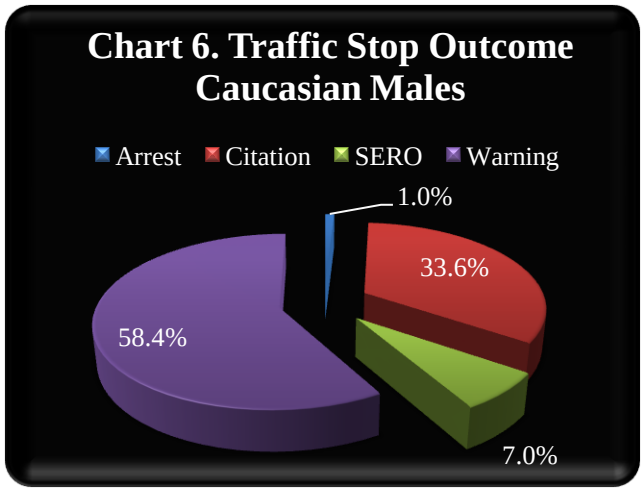


Chart 6. Traffic Stop Outcome
Caucasian Males
Arrest
Citation
SERO
Warning
1.0%
33.6%
58.4%
7.0%

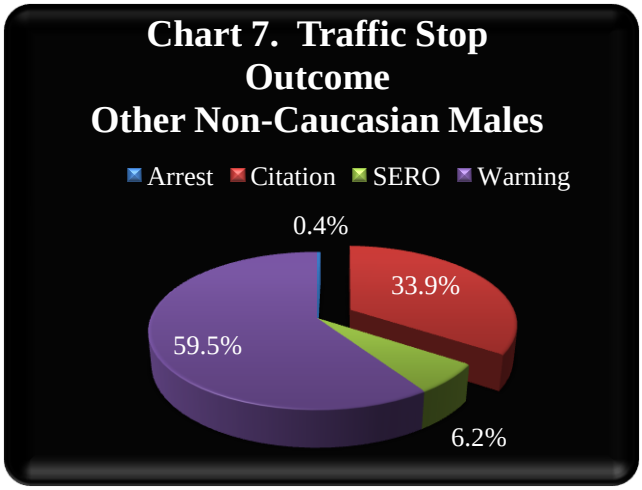


Chart 7. Traffic Stop
Outcome
Other Non-Caucasian Males
Arrest
Citation
SERO
Warning
0.4%
33.9%
59.5%
6.2%

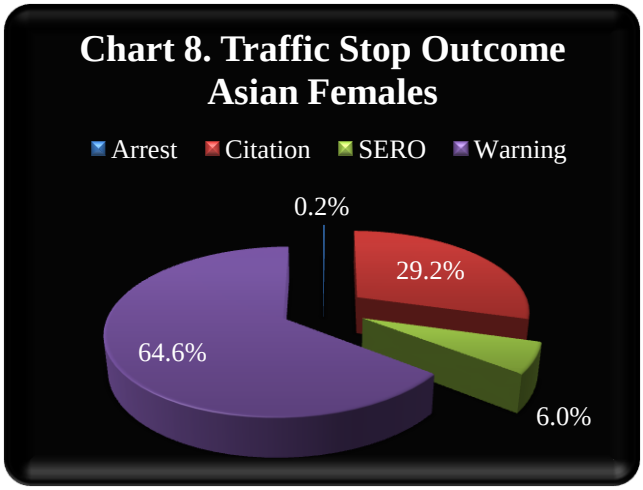


Chart 8. Traffic Stop Outcome
Asian Females
Arrest
Citation
SERO
Warning
0.2%
29.2%
64.6%
6.0%

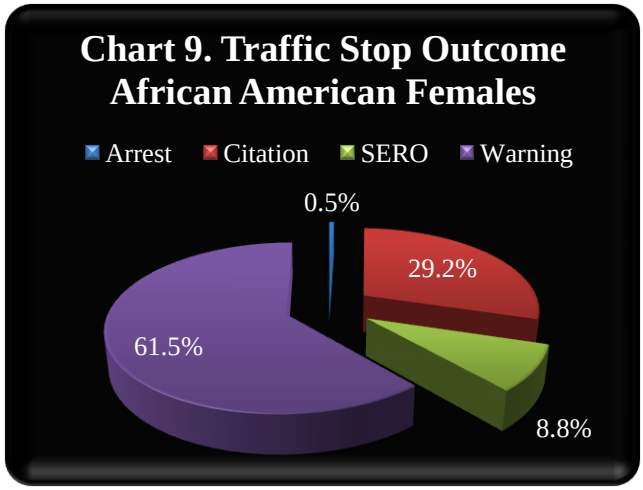


Chart 9. Traffic Stop Outcome
African American Females
Arrest
Citation
SERO
Warning
0.5%
29.2%
61.5%
8.8%

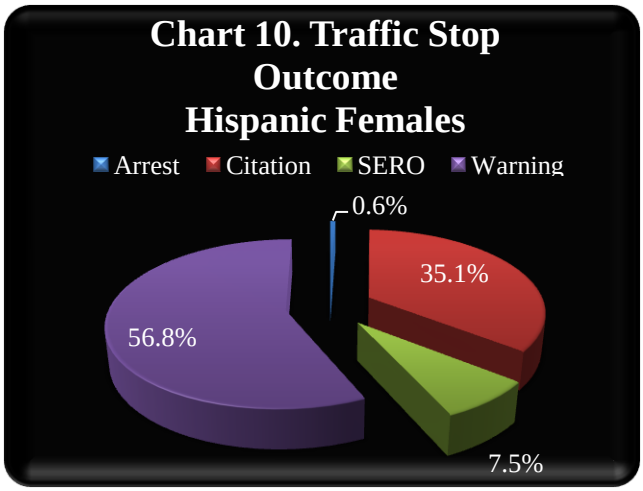


Chart 10. Traffic Stop
Outcome
Hispanic Females
Arrest
Citation
SERO
Warning
0.6%
35.1%
56.8%
7.5%

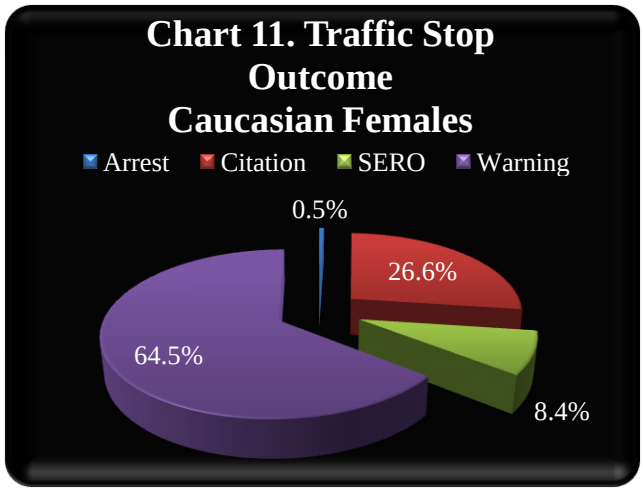


Chart 11. Traffic Stop
Outcome
Caucasian Females
Arrest
Citation
SERO
Warning
0.5%
26.6%
64.5%
8.4%

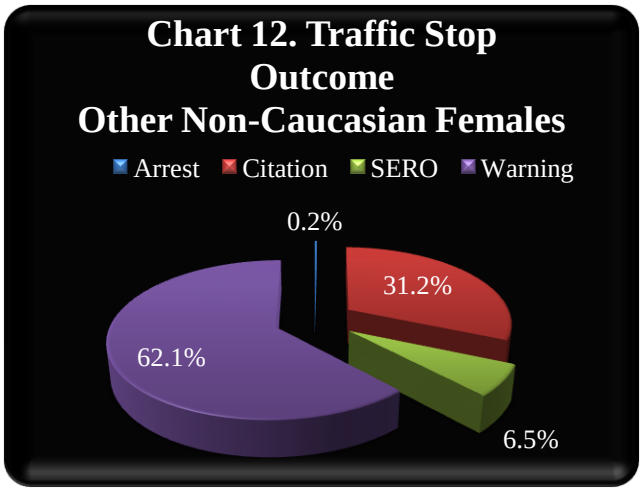


Chart 12. Traffic Stop
Outcome
Other Non-Caucasian Females
Arrest
Citation
SERO
Warning
0.2%
31.2%
62.1%
6.5%

Restricting the analysis to only those cases in which the traffic stop resulted in an arrest, **Tables 17 and 18** present the reason given by the officer for the arrest delineated by the driver's race/ethnicity and gender. An arrest reason was reported in 5,356 of the 7,152 arrests made (74.9%). Gender data was missing in 11 cases where an arrest was made. The most common arrest reason for all ethnic groups for both males and females were based on the stop, ranging from 45.3% for Hispanic males to 59.4% for Caucasian males, and 27.8% for Hispanic females to 58.2% for Caucasian females. Hispanic males and females were both less likely to be arrested based on the search than the other races/ethnicities. Caucasian males and Asian males were more likely to be arrested based on a traffic stop (59.4% and 57.1% than the other demographics. Asian males and females respectively were more likely than the other race/ethnicities to be arrested for an "other" reason. The stop reason was unknown/missing most often on the arrests of Hispanic males and females.

Table 17. Reason for Arrest by Driver's Race/Ethnicity and Gender (Males) n = 5559

Arrest Reason	Asian	African American	Hispanic	Other	Caucasian	Unknown/ Missing	Total
Based on Search	5	286	17	5	293	0	**606**
Percent	7.9%	12.1%	3.7%	7.6%	11.3%	0.0%	10.9%
Based on Stop	36	1171	209	35	1544	8	**3003**
Percent	57.1%	49.7%	45.3%	53.0%	59.4%	61.5%	54.0%
Other	9	240	28	9	302	3	**591**
Percent	14.3%	10.2%	6.1%	13.6%	11.6%	23.1%	10.6%
Unknown/Missing	13	659	207	17	461	2	**1359**
Percent	20.6%	28.0%	44.9%	25.8%	17.7%	15.4%	24.4%
Total	**63**	**2356**	**461**	**66**	**2600**	**13**	**5559**
Percent	**100.0%**	**100.0%**	**100.0%**	**100.0**	**100.0**	**100.0%**	**100.0%**

Table 18. Reason for Arrest by Driver's Race/Ethnicity and Gender (Females) n = 1582

Arrest Reason	Asian	African American	Hispanic	Other	Caucasian	Unknown/ Missing	Total
Based on Search	2	35	2	1	74	1	**115**
Percent	16.7%	5.4%	2.8%	6.7%	8.9%	16.7%	7.3%
Based on Stop	4	315	20	7	481	2	**829**
Percent	33.3%	48.5%	27.8%	46.7%	58.2%	33.3%	52.4%
Other	3	74	4	1	125	3	**210**
Percent	25.0%	11.4%	5.6%	6.7%	15.1%	50.0%	13.3%
Unknown/Missing	3	226	46	6	147	0	**428**
Percent	25.0%	34.8%	63.9%	40.0%	17.8%	0.0%	27.1%
Total	**12**	**650**	**72**	**15**	**827**	**6**	**1582**
Percent	**100.%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

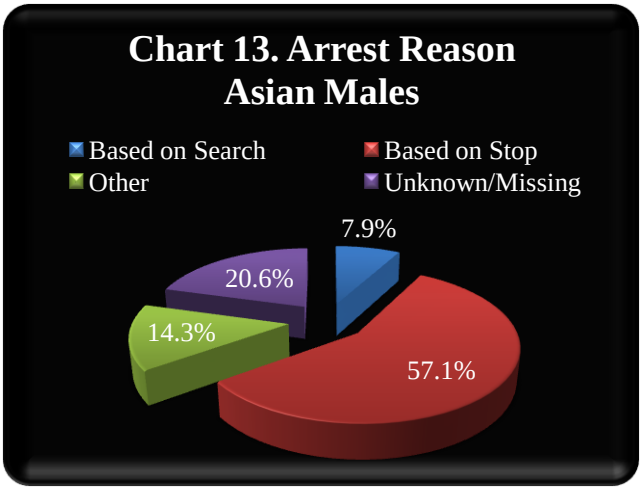


Chart 13. Arrest Reason
Asian Males
Based on Search
Based on Stop
Other
Unknown/Missing
7.9%
20.6%
14.3%
57.1%

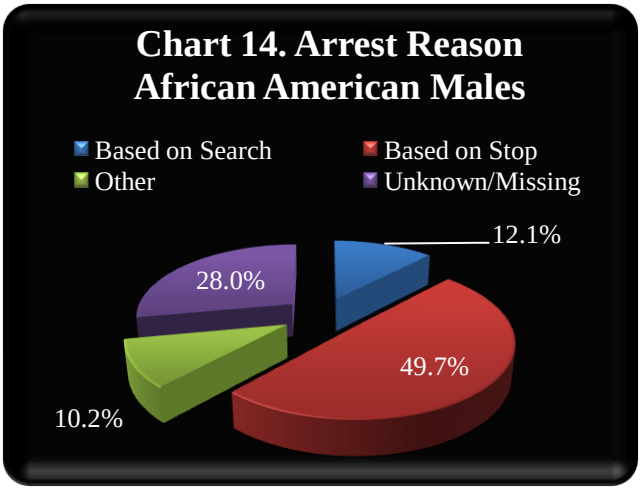


Chart 14. Arrest Reason
African American Males
Based on Search
Based on Stop
Other
Unknown/Missing
12.1%
28.0%
49.7%
10.2%


Chart 15. Arrest Reason
Hispanic Males
Based on Search
Based on Stop
Other
Unknown/Missing
3.7%
44.9%
45.3%
6.1%

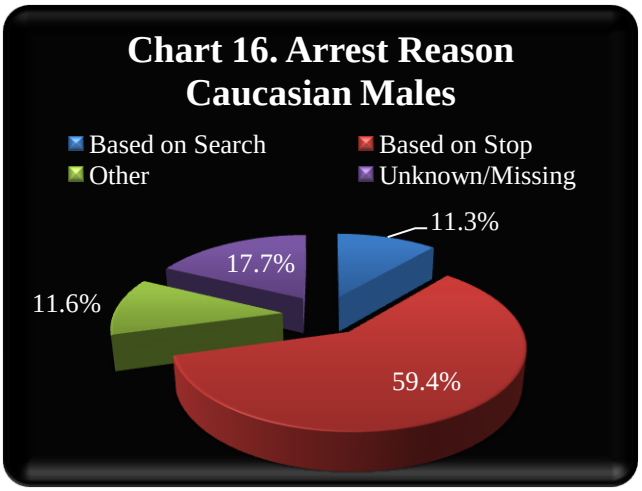


Chart 16. Arrest Reason
Caucasian Males
Based on Search
Based on Stop
Other
Unknown/Missing
11.3%
17.7%
11.6%
59.4%

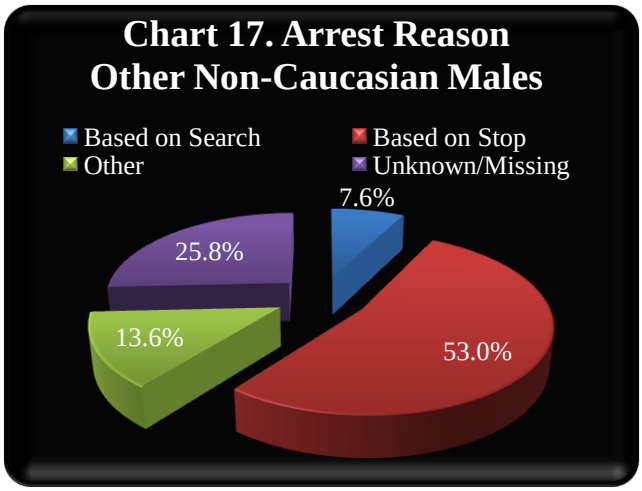


Chart 17. Arrest Reason
Other Non-Caucasian Males
Based on Search
Based on Stop
Other
Unknown/Missing
7.6%
25.8%
13.6%
53.0%

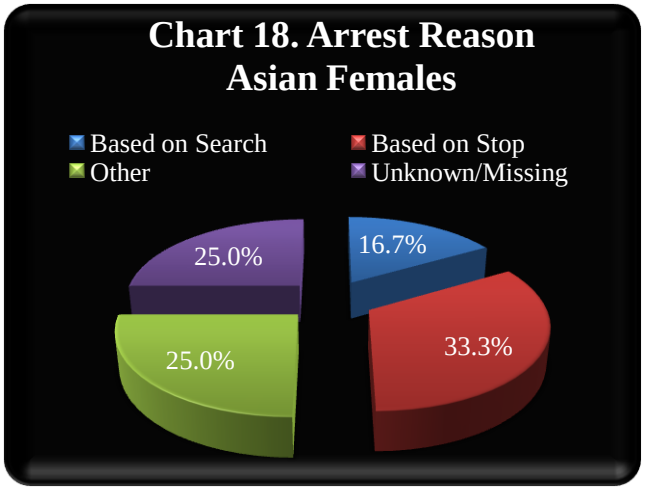


Chart 18. Arrest Reason
Asian Females
Based on Search
Based on Stop
Other
Unknown/Missing
25.0%
16.7%
25.0%
33.3%

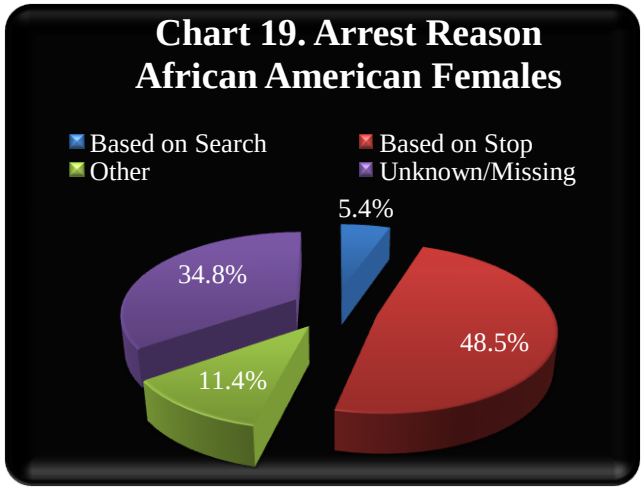


Chart 19. Arrest Reason
African American Females
Based on Search
Based on Stop
Other
Unknown/Missing
5.4%
34.8%
48.5%
11.4%

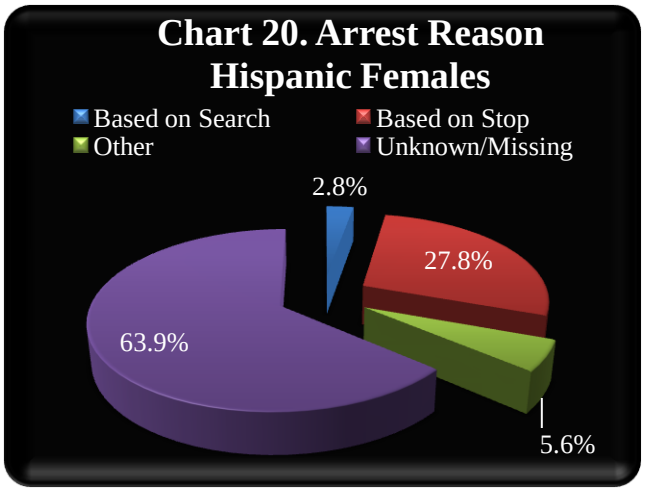


Chart 20. Arrest Reason
Hispanic Females
Based on Search
Based on Stop
Other
Unknown/Missing
2.8%
27.8%
63.9%
5.6%

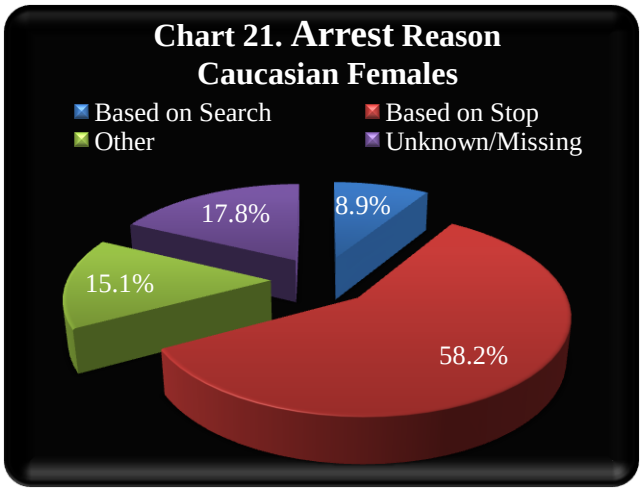


Chart 21. Arrest Reason
Caucasian Females
Based on Search
Based on Stop
Other
Unknown/Missing
17.8%
8.9%
15.1%
58.2%

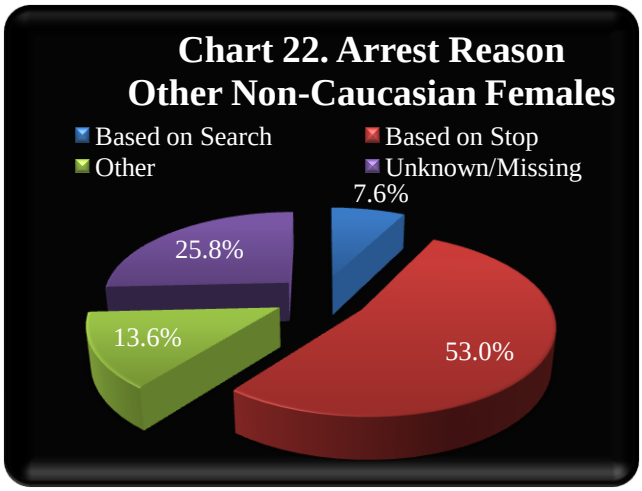


Chart 22. Arrest Reason
Other Non-Caucasian Females
Based on Search
Based on Stop
Other
Unknown/Missing
7.6%
25.8%
13.6%
53.0%

DISCUSSION AND RECOMMENDATIONS

The descriptive statistics suggest that traffic stops and the characteristics of traffic stops are generally consistent with regards to race/ethnicity. Across race/ethnicities and gender, both males and females were most likely to be stopped for a violation of Title 22 excluding African American and Asian females. Both male and female drivers stopped primarily reside in the state of Maryland. Searches of drivers and his/her vehicle are not conducted very often by police officers during traffic stops (approximately 1.0% of all stops). The two most common search reasons are reported as the giving of consent by the driver or a search that was conducted incident to arrest for males and probable cause established by an officer and a search incident to arrest for females. The search reason of both male and female non-Caucasians was more likely to be categorized as *Other* than was the search reason for Asian, African American, Caucasian, or Hispanic males. The majority of drivers stopped, without regard to their race/ethnicity, did not have property or contraband confiscated. Once stopped, drivers were most likely to receive either a written or verbal warning. On average, females received more warnings and were less likely to receive citations than males across all race/ethnicities. Caucasian males were the most likely to be arrested after a traffic stop had been conducted followed closely by African American males. Conversely, Hispanic females were the most likely to be arrested after a traffic stop was initiated. The majority of all arrests that were made by law enforcement during traffic stops were based on the initial reason for the stop.

While each of these observations has been revealed from the data, conclusions regarding the relationships between race/ethnicity and traffic stops should be cautiously interpreted and carefully utilized. First, the race and ethnic categories required under TR 25-113 differ from the race and ethnic categories used by the MVA. These differences can create inconsistencies in the data. To overcome this limitation, the TR 25-113 and MVA definitions should be consistent.

The major limitation of the current study pertains to the possibility of omitted variables that may account for any differences observed between race/ethnicities. The purpose of this report is to discover whether drivers who exhibit similar behaviors, but are of different race/ethnicities, are stopped at different rates and whether the traffic stops result in different treatment and outcomes. However, the current method allows the possibility of error by neglecting confounding variables, such as driving behavior, the driver's violation history, and law enforcement deployment. If temporal and spatial traveling patterns differ by race/ethnicity, any differences observed may be the result of these driving patterns and not systematic differences between race/ethnicities. Considering that it is unknown whether traveling behavior and patterns differ by race/ethnicity, no statistical conclusions can be drawn regarding whether there is differential treatment. No definitive conclusions can be drawn from this report regarding the effect of race/ethnicity on the frequency or characteristics associated with traffic stops due to data limitations beyond the scope of what reporting agencies could provide. However, the Maryland Statistical Analysis Center is committed to strengthening communication with law enforcement agencies to facilitate the collection of data and improve the traffic stop data reporting methodology moving forward.