

Identifying and Promoting Best Practices During Traffic Stops: Final Report

**Prepared for the Fairfield Police Department
and the City of Fairfield, Ohio**

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1. INTRODUCTION

OVERVIEW

The research described in this final report was designed to provide a better understanding of Fairfield Police Officers' decisions to stop, cite, search and arrest citizens during traffic stops, and to determine the best practices that Fairfield Police administrators seek to promote within their agency. Based on the research findings, all Fairfield Police Officers were provided specialized training and specific actionable policy recommendations have been provided to the Fairfield Police Department. This final report documents the findings from focus groups with Fairfield Police Officers, the development of a specific form for supervisory review of traffic stop videotapes, and statistical analyses of traffic stop data. In addition, the specific training delivered to officers in the Fairfield Police Department (FPD) is detailed.

Problem

Nationwide, traffic stop studies have reported patterns of differential treatment in post-stop outcomes for minority drivers, particularly for search and seizure rates. These studies show that although minority motorists are stopped and searched at higher rates compared to Caucasian motorists, contraband is less likely to be discovered on searched minority motorists compared to Caucasians. Despite these racial/ethnic disparities reported nationwide in the use of searches during traffic stops, they remain a potentially effective, yet underutilized tool for criminal interdiction purposes. The ability of the FPD to produce fair and equitable policing to its constituents will require a balancing of the needs for law enforcement with equal protection and due process of the laws.

Research and Policy Issues

Studies across the country have shown that patterns of racial/ethnic disparities in stop, search, and seizure rates exist across the country. Several hypotheses have been advanced to explain these disparities. One of these explanations is that some verbal, non-verbal, and behavioral cues used by law enforcement officers to determine suspicious behavior are not racially neutral. That is, although law enforcement officers do not consciously consider race and ethnicity when determining whom to search, the cues used to determine suspiciousness may occur more frequently with minorities. Through the use of focus groups, this research explored the reasons why officers select particular vehicles for traffic stops, and what leads to decisions regarding canine usage, conducting searches, issuing citations, etc. In addition, these groups explored how officers were trained and their perceptions regarding the usefulness and accuracy of the training they received.

Overview of Methodology

This study is designed to assess why officers engage in traffic stops and what predicts post-stop outcomes (i.e., citations, arrest, searches, and seizures) received by citizens. The research focused specifically on racial/ethnic patterns that differ from patterns found

for White motorists. The research design included five components to identify the “best practices” of officers in search activity during traffic stops:

1) Examination of traffic stops:

- Collect data on all traffic stops conducted by the Fairfield Police Department, regardless of outcome (i.e., citation, warning, arrest, etc.)
- Develop an analysis plan to examine these data in an effort to better understand any patterns of racial / ethnic disparities

2) Examination of post-stop decisions:

- Use data collected on all traffic stops to examine any racial/ethnic disparities in post-stop outcomes (i.e., citation, warning, arrest, searches, etc.)
- Develop an analysis plan to examine these data in an effort to better understand any patterns of racial / ethnic disparities

3) Identifying best practices in traffic stops:

- Conduct focus groups with officers identified by their supervisors as representing the “best practices” of traffic stops, criminal interdiction, professionalism, etc.
- Perform qualitative data analyses of information obtained during the focus groups

4) Develop methodology for internal review of MVR tapes

- Develop coding scheme to identify any potential officer bias during traffic stops
- Implement the internal use of the coding scheme as a police managerial tool for use as one component of an early warning system

5) Develop and implement training designed to reduce officer bias

- Revise training curricula based on research findings and known best practices in the field
- Administer new training curricula to all Fairfield Police officers

Participating Agency

This research project is a collaboration between the Consultant and the Fairfield Police Department. The findings of the research served as the cornerstone for changes in Fairfield Police Department training designed to improve law enforcement productivity and reduce the potential for racial/ethnic inequalities. Lt. Haddix of the Fairfield Police Department served as the Project Manager and direct liaison to the research consultant, Dr. Robin Engel.

Original Timeline, Tasks & Project Deliverables

- **One year contract (06/01/07 – 05/03/08)**
- **June – July 2007:** Examine current practices and training curriculum
- **July 2007:** Conduct focus groups with officers to determine “best practices” in traffic stops, encounters with citizens, and criminal interdiction activities
- **August 2007:** Review all bias-based policing complaints from citizens
- **August – September 2007:** Review videotapes of police-citizen encounters for training purposes; create coding scheme as police managerial tool
- **June – July 2007:** Establish a data collection system to capture information regarding all traffic and pedestrian stops
- **July 2007:** Train officers regarding use of the data collection instrument
- **August 2007:** Pilot test the data collection system
- **September 2007:** Make any necessary adjustments to data collection system
- **October 2007 - May 2008:** Continual data audit / oversight of data collection
- **November 2007 – March 2008:** Develop biased-based policing training curriculum based on data analyses and best practices identified during focus groups
- **March – May 2008:** Provide bias-based policing training to all members of Fairfield PD
- **March – April 2008:** Perform statistical analyses of traffic stop data
- **May 2008:** Final written report including statistical analyses of data available

This original timeline was modified to allow for the analyses of additional traffic stops through August 31, 2008. By including an additional three months of data, more advanced statistical analyses could be performed.

REPORT OUTLINE

The following report includes an examination of traffic stop data collected between September 1, 2007 and August 31, 2008 and focus group interviews conducted with

Fairfield, OH Police Department (FPD) officers. It is organized into seven sections: 1) introduction, 2) summary of focus groups, 3) methodology and description of traffic stop data, 4) analyses of post-stop outcomes, 5) search and seizure analyses, 6) summary of training provided, and 7) conclusions and policy recommendations. The general content for Sections 2 - 7 are described below.

Section 2

Section 2 reports the methodology and findings of the focus groups conducted periodically in 2007 and 2008 with FPD officers. The purpose of conducting the focus groups was to understand “best practices” of traffic stops, criminal interdiction, and professionalism as was currently delivered by FPD officers and understand the deficiencies in these best practices. The research was specifically designed to better understand perceptions of suspiciousness and search decisions based on information provided by officers who were identified by their supervisors as engaging in best practices. In addition, information was sought to understand the impediments to these best practices, and the specific training needs for this agency.

Section 2 also documents the development of an instrument to assist field supervisors in the periodic review of their subordinates’ traffic stops recorded on videotapes. This form was developed in consultation with FPD field supervisors and pilot tested by these same officers. A series of recommendations surrounding the use of this instrument are also presented.

Section 3

Section 3 describes the methodology for the traffic stop data collection effort and describes the collected data. The police stop dataset includes 7,378 traffic stops made by Fairfield police officers between September 1, 2007 and August 31, 2008. Specifically, it provides descriptive statistics for the traffic stop data regarding the number of stops, characteristics of the stops (e.g., time, day, rush hour, duration of the stop, month of stop, length of the stop), the reason for the stop (e.g., speeding, moving violation, equipment violation, license/registration, etc.), outcomes of the stop, and the characteristics of stopped drivers (e.g., gender, race, age, residency). The averages for this information are reported in tables at the department and shift levels.

Section 4

Section 4 examines racial and ethnic differences in reasons for the stop and post-stop outcomes (e.g., warning, citation, search, seizure of contraband, and arrest). Information examining reasons for the stop and stop outcomes is presented for different drivers by race and gender at the department and shift levels. At the conclusion of Section 4, several multivariate analyses are presented that predict officer decision making after the traffic stop has been made. That is, these analyses document whether the outcomes that drivers receive after traffic stops are made (e.g., warnings, citations, arrests, and searches) differ significantly based on a multitude of factors.

Section 5

Section 5 focuses specifically on the post-stop outcomes of searches and seizures. This section describes the types of searches and seizures at the department and shift levels. It further documents the search rates for minority motorists compared to Whites, and describes the racial/ethnic disparities in types of searches and seizures at the department level. Comparisons of racial/ethnic differences in discretionary search success rates, rates of asking for consent, consent refusals, and consent search success rates are also examined.

Section 6

Section 6 describes the assessment of specific training needs of the Fairfield Police Department based on focus group feedback and a review of current policies, procedures, and training curricula of the FPD as they related to bias-based policing practices. The development and content of the specific training curricula delivered to FPD officers is documented. Specifically, the section reviews the content of four distinct training topics: 1) national and local trends in bias based policing legislation and research, 2) improving customer service, 3) positive police-citizen relations, and 4) a legal refresher on traffic stops. Finally, the results of a course evaluation survey completed by participating officers are discussed.

Section 7

Section 7 summarizes the information presented, and provides policy recommendations based on interpretations of collected data and the focus group interviews. Note that the findings reported in this document must be interpreted cautiously. The data collected and presented in this report cannot be used to determine whether or not FPD officers have individually or collectively engaged in “racial profiling.” In addition, the legality of prior or future individual traffic stops cannot be assessed with these data. This report is designed to give feedback to FPD administrators regarding the status of the data collection process, along with exploring trends and patterns in the data that may be utilized for training purposes.

Appendix A

Appendix A provides a copy of the informed consent form used for focus group participants.

Appendix B

Appendix B provides a copy of the Traffic Stop Tape Review Checklist.

Appendix C

Appendix C provides a copy of the Fairfield Police Department Traffic Stop Data Collection Form and Instructions for completing that form.

Appendix D

Appendix D provides a copy of the training course evaluation survey.

2. SUMMARY OF FOCUS GROUPS

OVERVIEW OF FOCUS GROUP RESEARCH

To fully understand the source of racial and ethnic disparities in police stops, it is important to examine sources of information in addition to official data collected by FPD. Analyses of official data alone likely cannot achieve FPD's goal to promote effective and respectful policing. Statistical analyses of official data can identify potential problem areas, but these analyses cannot address the reasons for any racial/ethnic disparities detected. To understand *why* racial and ethnic disparities in police activities exist, alternative and creative methodologies must be sought. It is only with the knowledge of why racial and ethnic disparities may exist that the FPD can determine the appropriate course of action to reduce these disparities. Therefore, in addition to the traffic stop data reported in Sections 3-6 of this report, the FPD voluntarily conducted additional research designed to identify the "best practices" in traffic stops.

The goals of this research are to maximize the effectiveness of traffic stop practices by systematically identifying best practices of FPD officers and identifying potential impediments to these best practices. This information can be used to modify current training and policies in order to meet the objectives of maximizing department-wide productivity, while also minimizing potential racial/ethnic inequalities. The findings documented in this report are based on information gathered during four focus groups sessions comprised of five to eight FPD officers. The sessions were held with the same group of officers on 9/10/07, 11/01/07, 11/12/07, and 12/18/07. Each focus group interview lasted approximately 2-3 hours and followed the methodological strategies proposed by Morgan (1988, 1996) and Krueger (1988), further outlined below. Participants were advised that participation in the focus groups was voluntary and they could leave the session at any time for any reason. Participants were further informed about their protections for confidentiality. They were asked to read and sign an informed consent form (see Appendix A) prior to involvement in the focus groups, documenting the procedures of the research and protections of confidentiality.

One of the primary goals of conducting focus groups with a moderator outside of the police organization is to better understand the impediments and constraints felt by those working within the organization. Subordinates may not feel comfortable disclosing this information directly to other members within the organization. Therefore, while it is important for the external moderator to establish credibility and rapport to obtain valid information, it is likely that this type of external review will result in more candid information than if the research were conducted internally. Furthermore, although research studies are often poorly received by rank and file officers, participation in "best practices" research actually enhances officer morale and encourages reliable and valid research outcomes. Officers who are identified as exhibiting practices that the department wishes to learn from and model are often very willing to share their experiences. In addition, officers perceive that the administration cares about changing the impediments they encounter in their work when asked for individual feedback to guide policy and training decisions, rather than simply making policy decisions based on statistical data.

The focus groups were moderated by Dr. Robin Engel, who has extensive previous experience in this type of research and is an expert in the area of criminal interdiction “best practices.” The focus groups were also attended by one of Dr. Engel’s employees who took detailed notes during the sessions. The focus groups were conducted at FPD Headquarters and officers were on an “on-duty” status to increase and encourage comfort while discussing issues related to their daily activities (Krueger, 1988; Morgan, 1988).

SELECTION OF FOCUS GROUP PARTICIPANTS

The purpose of conducting focus groups was to gather information regarding the perceived “best practices” currently used by FPD officers for traffic stops from a variety of perspectives. One goal of the research was to understand the best practices and impediments from field officers’ experiences, and specifically to understand any potential racial/ethnic disparities. A related goal was to understand criminal interdiction from the perspective of specialized officers (e.g., canine handlers). Finally, it was also important to understand the challenges associated with supervising officers involved in traffic stops and to solicit supervisors’ responses to some of the comments made by officers in focus groups.

Based on these research goals, the FPD officers selected to participate in these focus groups were selected by FPD command staff. Focus group participants included canine handlers, sergeants, and patrol officers identified as engaging in best practices. Criteria for identifying best practices included: 1) officers’ productivity (i.e., engages in high number of traffic stops), 2) accuracy (i.e., high percentages of their searches result in seizures), and 3) professionalism (i.e., courteous in their encounters with citizens, exhibiting no obvious signs of racial or ethnic bias, etc.). Sergeants were identified by their superiors as either being heavily involved in supervising active officers and/or otherwise displaying the “best overall supervisory practices.”

CONTENT OF FOCUS GROUP INTERVIEWS

The content of the focus groups encompassed the following topics: 1) indicators of suspicion both prior to and during the stop, as well as the accuracy of such cues, and the importance of considering the totality of circumstances; 2) the decision to search and factors contributing to search success rates (particularly searches of minorities); 3) participants’ perceptions of their peers and the reasons they are less active in traffic stops; 4) general impediments to effective traffic stop practices; 5) training and its effectiveness; 6) perceptions of the current data collection effort; and 7) recommendations for change as suggested by the participants.

The moderator loosely followed a pre-established questioning route (Krueger, 1988; Morgan, 1988) designed to elicit information related to the research topics listed above. In all focus group sessions, the moderator occasionally asked clarifying or follow-up questions after the participants gave responses to questions. To ensure that everyone participated in the discussion, the moderators occasionally directed questions to specific

participants who had not made many comments up to that point (Krueger, 1988; Morgan, 1988). As a result, all participants made substantive comments during the interviews.

FINDINGS

FPD officers assigned to the focus groups indicated many strengths of their department. They suggested that their agency was well-equipped, and that the equipment they had access to was of higher quality and better maintained than many other surrounding departments. They also indicated that they had new facilities (e.g., new buildings, locker rooms, workout facility) and room for their agency to grow within these facilities.

Officers also indicated that they did have opportunities for specialty assignments and varied career paths that were not typical of other suburban agencies their size (e.g., canine, vice, SWAT, honor guard, school resource officers, community relations positions, etc.). They also noted, however, that there was sometimes less opportunity and not enough growth in these specialized areas.

FPD focus group participants were proud to describe their service orientation and believed that citizens in their community received better police services than in other areas. They emphasized FPD's quick response to calls for service and that they believed their officers treated the public with respect unlike some officers in other surrounding agencies. They agreed that FPD was a good organization to work for because they had flexibility for time off, a strong benefits package, and a higher pay scale than many other police agencies. In addition, they noted the availability for overtime duties as an advantage of working for FPD. In summary, the officers noted many positive aspects of their work environment and strengths of their organization.

In addition, however, officers noted several areas that they considered weaknesses or areas for improvement with their agency. Officers noted that communication from the administration to the field officers was sometimes strained and that the information is communicated in different manners depending upon the supervising officers on duty. Further, officers in the focus groups noted that there was sometimes inconsistency in supervisory styles and conflicting messages based on this inconsistency. The lack of consistent field supervision and strong leadership from managers was a consistent theme discussed across the four focus group sessions. Specifically, focus group participants indicated that field supervision was an area in need of improvement within the FPD because of supervisors' general inconsistencies, apprehension in decision-making situations, and reluctance to mentor officers and correct behavior when necessary. Officers noted that in some cases there was a lack of accountability for officers and supervisors.

Related to their concerns regarding the lack of consistency in field supervision, focus group participants noted that the policies and procedures of the agency were often changing and that the working practices of officers in the department may not necessarily reflect the written policies and procedures. Officers indicated there was little permanency in changes to policies and procedures and that sometimes the changes were

based on supervisors' interpretations of recent changes rather than the actual policy/procedure as written. They also suggested that some policies and procedures were too vague and might lead to inconsistencies across the agency because of the different supervisory interpretations.

Focus group participants also noted that believed many of their peers were somewhat complacent in their work. They indicated that there are few rewards or incentives for doing exceptional work, and that those striving to work harder are more likely to get complaints (based on their proactivity – more contacts with citizens leads to more opportunities that citizens may be dissatisfied).

When discussing training issues, focus group participants indicated that they believed that the agency needed more training on traffic stops, including training on officer safety, legal requirements, customer service, and bias-free policing tactics. They recommended the use of both in-house and outside trainers. Further they recommended the use of videos for in-service training, including both positive and negative examples of traffic stops conducted by officers.

The focus groups also included discussions about cues of suspicion, use of searches during traffic stops, and forms of criminal interdiction used by FPD officers. These discussions did not reveal anything to suggest that FPD officers were targeting particular racial and ethnic groups. Details regarding these discussions are not disclosed within this report so that legal police tactics used for criminal interdiction purposes are not documented publicly.

When prompted specifically about bias-based policing issues, focus groups participants were very forthright in their discussions. There was some disagreement among the group about the use of the canine during the traffic stop of Mr. and Mrs. Betts (settlement of this case resulted in the research discussed within this report). Some participants argued that the officer had not acted inappropriately and had followed policy. Others believed that the situation should have been handled differently, though no participants believed that the Betts family was treated differently based on their race. Officers did note that there are few Black officers on the police force (only two) and that there should be attempts made for more diversity. They also noted, however, that the Fairfield community itself was the source of some discrimination – describing calls received by dispatchers from citizens requesting that officers be sent to investigate a Black male walking down the street (for example). In these cases, supervisors will actually call off the dispatched request because there is no indication that a crime is occurring. The focus group participants also indicated that there is much pressure within the county to treat Hispanics differently and they were proud that their agency has resisted such discriminatory sentiments and practices. Even so, they agreed that training to reduce the potential for bias-based policing would be beneficial for their department. Many of their specific recommendations were included in the training that was ultimately delivered to all Fairfield Police Officers in June 2008.

VIDEOTAPE REVIEW

In addition to focus groups conducted with officers to understand how to promote best practices in traffic stops, a smaller group of field supervisors were informally interviewed in February 2008 to discuss the creation of a checklist to increase the quality of supervisory oversight based on reviews of videotapes generated during traffic stops.

A specific form was created for field supervisors' use to standardize the review process. This form was pilot tested by two FPD supervisors and both agreed that the instrument was easy to use, and would be helpful to standardize the review process. In addition, the following recommendations regarding supervisory reviews of traffic stop videos were made to Chief Dickey:

- Develop specific policy for supervisory review of videotapes
- Require the use of the new checklist to document reviews (see Appendix B)
- Ensure all supervisors adopt the policy and directly address supervisors who do not review the tapes on a regular basis
- Develop / enforce a policy to require body microphone use during all traffic stops
- Review tapes of every officer once every three months
- Review a minimum of five stops per officer
- Ensure the stops for review are selected at random (currently only the first stop is reviewed)
- Do not allow supervisors to inform officers when their traffic stops will be reviewed

SECTION SUMMARY

This section reported the methodology and findings of the focus groups conducted periodically in 2007 and 2008 with FPD officers. The purpose of conducting the focus groups was to understand “best practices” of traffic stops, criminal interdiction, and professionalism as was currently delivered by FPD officers and understand the deficiencies in these best practices. The research was specifically designed to better understand perceptions of suspiciousness and search decisions based on information provided by officers who were identified by their supervisors as engaging in best practices. In addition, information was sought to understand the impediments to these best practices, and the specific training needs for this agency.

FPD officers participating in the focus groups noted a number of strengths of their department, including:

- Agency is well-equipped with high quality and soundly maintained equipment and new facilities
- Opportunities for specialty assignments and varied career paths exist (e.g., canine, vice, SWAT, honor guard, school resource officers, community relations positions, etc.).
- Strong service orientation of the department exemplified by quick response to calls for service

- Strong benefits for employees as well as flexibility for time off, higher pay scale than many other police agencies, and availability for overtime duties.

In addition, however, officers noted several areas that they considered weaknesses or areas for improvement with their agency, including:

- Communication from the administration to the field officers was sometimes strained and that the information is communicated in different manners depending upon the supervising officers on duty.
- Inconsistency in supervisory styles and conflicting messages based on this inconsistency.
- Occasional lack of accountability for officers and supervisors.
- Changes in policies and procedures of the agency that often do not translate to the working practices of officers in the department.
- Complacency of some officers--few rewards or incentives for doing exceptional work.
- When discussing training issues, focus group participants indicated that they believed that the agency needed more training on traffic stops, including training on officer safety, legal requirements, customer service, and bias-free policing tactics.

In terms of the participants' discussions on bias-based policing, the officers made the following general comments:

- Participants generally did not believe citizens to be treated differently based on their race/ethnicity.
- Suggested that the department should make an attempt at greater diversity in hired officers.
- Perceived the Fairfield community as being a source of some discrimination – described calls received by dispatchers from citizens requesting action from officers toward Black and Hispanic citizens that might not be warranted based on actual criminal activity.
- Agreed that training to reduce the potential for bias-based policing would be beneficial for their department.

This section also documented the development of an instrument to assist field supervisors in the periodic review of their subordinates' traffic stops recorded on videotapes. This form was developed in consultation with FPD field supervisors and pilot tested by these same officers. A series of recommendations surrounding the use of this instrument moving forward was also provided to Chief Dickey.

3. DESCRIPTION OF TRAFFIC STOP DATA

OVERVIEW

Section 3 describes the methodology for the traffic stop data collection effort and the findings based on traffic stop data collected by FPD officers for the period of September 1, 2007 through August 31, 2008. This section is divided into three parts that report: 1) summary of traffic stop data collection methodology, 2) characteristics of traffic stops conducted in 2007 - 2008, and 3) characteristics of drivers stopped by FPD officers in 2007 - 2008. The information reported is strictly descriptive in nature. This summary does not include analyses that examine causal influences, and any data presented at aggregate levels are solely for purposes of comparison across FPD organizational units.

The first section provides a summary of the traffic stop data collection methodology. The second section includes Tables 3.1 – 3.4, which report the characteristics of traffic stops for 2007 – 2008 across the department and shifts. Table 3.1 reports the total number of stops, the percentage of stops by weekday, rush hour, and daytime hours, and the duration of the stop. Table 3.2 provides a monthly breakdown of traffic stops across the department and shifts in 2007 – 2008. Table 3.3 reports the reasons for the stop (prior to and subsequent to) across the department and shifts. Table 3.4 reports the stop outcomes received by drivers stopped across the department and shifts. The third section includes Tables 3.5, which reports the characteristics of drivers (e.g., age, gender, race/ethnicity, and residency) stopped by FPD officers in 2007 – 2008 across the department and shifts.

TRAFFIC STOP DATA COLLECTION METHODOLOGY

The FPD data collection form to collect traffic stop data was developed through an interactive process with the FPD. Many police agencies across the country routinely collect traffic stop data, and have various methods for capturing that information (for review, see Engel et al., 2007). Templates from other agencies were distributed to FPD commanders and ultimately, a data collection form was tailored specifically to meet the needs of the FPD. This form was pilot tested with a group of officers, revisions were made, and a final form was distributed for use in the field in September 2007. Officers from every shift were trained on the use of the form by Dr. Engel during a one-hour session that included a question and answer opportunity. In addition, written procedures and instructions were created and distributed to all FPD personnel. The form and instructions are included in Appendix C. Officers were instructed to fill out the form after every officer-initiated traffic stop.¹

¹ Traffic stops that were initiated by citizens or dispatchers are not included in this data collection effort. This excludes all police-citizen contacts that are the result of calls for service, accidents, or otherwise citizen initiated. Further, it excludes all police-citizen encounters that are not based on traffic stops (e.g., pedestrian stops).

TRAFFIC STOP CHARACTERISTICS

Traffic Stop Descriptives

Table 3.1 documents specific information regarding officer-initiated traffic stops from September 1, 2007 – August 31, 2008 at the department and shift levels, including: total number of stops, percent of stops occurring on weekdays, during daytime hours and rush hour, as well as the duration of the stops.

As shown in Table 3.1, traffic stops by officers assigned to Shift 2 accounted for nearly half (46.3%) of the 7,378 stops by FPD, while stops by officers assigned to Shift 4 performed the fewest number of stops (n=148). It is important to note, however, that Shift 4 consists of officers assigned to the various investigative units within FPD and, due to these responsibilities, they are unlikely to initiate a significant number of traffic stops.

The majority of the 7,378 stops for the department were initiated on a weekday (68.1%). Approximately half (51.0%) occurred during the daytime and 33.7% occurred during morning or evening rush hours. The overwhelming majority of stops lasted between zero and twenty minutes (0-10 minutes 80.4%; 11-20 minutes 15.5%). Due to the time differences of the assigned shifts, these percentages vary considerably across each of the shifts. Please refer to Table 3.1 for specific variation at this organizational level.

Traffic Stops By Month

Table 3.2 provides the temporal breakdown of traffic stop occurrences by month for 2007 - 2008. At the department level, August accounted for the highest percentage of stops (12.2%), followed by February and April (10.6% in each) and July (10.4%). The lowest percentage of traffic stops at the department level occurred in December (4.1%). Table 3.2 also documents the variation in temporal trends at the shift level.

Table 3.1: 2007 - 2008 Traffic Stop Characteristics

	Total # of Stops	% Weekday	% Daytime	% Rush Hour	Duration of Stop (in Minutes)					
					% 0-10	% 11-20	% 21-30	% 31-45	% 46-60	% 60+
Fairfield Police Department	7,378	68.1	51.0	33.7	80.4	15.5	2.5	1.0	0.4	0.2
Shift 1 (6:00 am – 2:30 pm)	1,658	81.0	92.9	49.0	90.3	8.4	1.0	0.2	0.1	0.0
Shift 2 (2:00 pm – 10:30 pm)	3,414	65.1	58.1	44.9	75.8	18.9	3.3	1.4	0.4	0.2
Shift 3 (10:00 pm – 6:30 am)	2,157	70.7	7.5	4.0	81.4	14.4	2.6	0.9	0.4	0.3
Shift 4 (8:00 am – 4:00 pm)	148	60.1	54.7	35.1	62.2	30.4	2.7	0.0	3.4	1.4

Table 3.2: 2007 - 2008 Traffic Stops by Month

	% Sept 2007	% Oct 2007	% Nov 2007	% Dec 2007	% Jan 2008	% Feb 2008	% Mar 2008	% Apr 2008	% May 2008	% June 2008	% July 2008	% Aug 2008
Fairfield Police Department	4.4	4.6	5.7	4.1	9.4	10.6	9.9	10.6	8.3	9.8	10.4	12.2
Shift 1 (6:00 am – 2:30 pm)	5.3	4.8	6.5	4.3	10.2	9.8	10.0	12.9	7.0	9.5	10.4	9.3
Shift 2 (2:00 pm – 10:30 pm)	2.4	3.4	4.6	4.5	10.0	10.8	10.0	11.4	10.4	11.0	10.8	10.9
Shift 3 (10:00 pm – 6:30 am)	5.5	4.7	6.4	3.6	8.6	11.2	10.1	8.3	6.6	8.7	10.1	16.2
Shift 4 (8:00 am – 4:00 pm)	24.3	25.0	10.8	3.4	0.7	7.4	5.4	2.0	0.0	0.0	3.4	17.6

Reason for the Stop

Table 3.3 reports the reasons for the stops by FPD officers, including: 1) speeding, 2) moving violations, 3) equipment violations, 4) license/registration violations, 5) investigatory stops, 5) LEADS inquiry², and 6) other. Information for these categories is summarized at the department and shift levels. Additionally, the data collection form captures reasons for the stop both prior to and subsequent to the stop. Approximately 8.6% of all stops (n=631) recorded a reason subsequent to the stop.

Across the department in 2007 - 2008, the most frequent reason for the stop prior to the stop was a speeding violation (35.8%). For these stops, the average amount over the limit for which drivers were stopped was 15.8 miles per hour. Other common reasons for the stop prior to the stop were moving violations (25.9%) and equipment violations (20.5%). The most common reasons for a stop subsequent to the stop being made were license/registration violations (5.0%) and equipment violations (1.5%). Overall, the most common reasons for stops were speeding (36.3%), moving violation (26.8%), equipment violation (22.0%), and license/registration (17.2%). As shown in Table 3.3, greater variation in the reasons for stops is evident at the shift level.

² Police officers in Ohio do not need any justification to initiate a vehicle license plate query through the state's computerized data file, known as LEADS (Law Enforcement Automated Data System). When an officer initiates a license plate query through LEADS, a driver's license status of the registered owner of the license plate is automatically generated, as well as an arrest warrant check. If there is an issue with the driver's license status, or if there are any outstanding arrest warrants, this gives the officers a legal right to stop the vehicle.

Table 3.3: Reasons for the 2007-2008 Traffic Stops (n=7,378)

	% Speeding		Amt. over limit (MPH)	% Moving Violation		% Equipment		% License/ Regist.		% Investigative		% LEADS Inquiry		% Other	
	P*	S*		P	S	P	S	P	S	P	S	P	S	P	S
Fairfield Police Department	35.8	0.5	15.8	25.9	0.9	20.5	1.5	12.2	5.0	4.2	0.3	1.0	0.2	0.6	0.3
Shift 1 (6:00 am – 2:30 pm)	57.2	0.2	16.3	28.5	0.2	7.3	0.4	5.7	3.7	0.6	0.0	0.1	0.1	0.7	0.1
Shift 2 (2:00 pm – 10:30 pm)	25.6	0.4	15.7	26.7	0.7	20.5	1.6	20.6	4.9	4.7	0.3	1.6	0.4	0.4	0.3
Shift 3 (10:00 pm – 6:30 am)	32.9	0.8	15.6	23.7	1.8	31.7	2.2	4.5	6.1	6.3	0.6	0.6	0.2	0.6	0.3
Shift 4 (8:00 am – 4:00 pm)	73.6	0.0	14.6	12.2	0.0	6.1	0.7	5.4	8.1	2.0	0.0	0.0	0.0	0.7	2.0

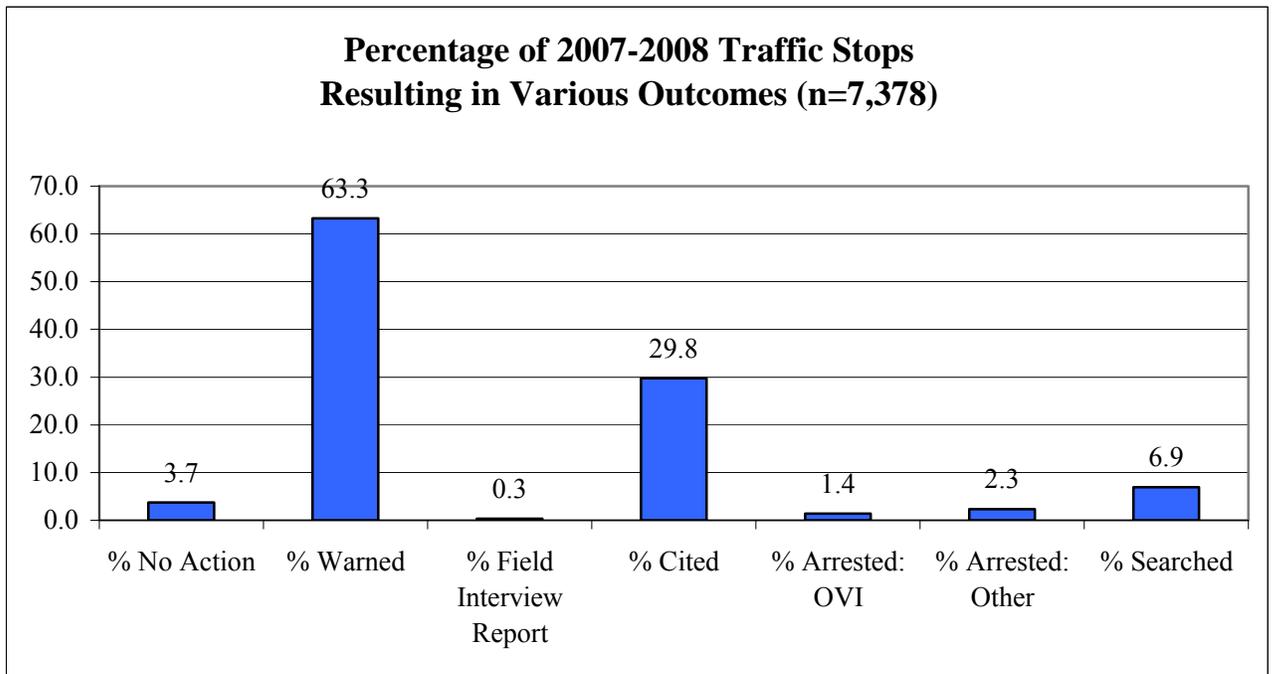
* P=prior to stop, S=subsequent to stop

Post-Stop Outcomes

Table 3.4 reports at the department and shift level, the percentage of drivers receiving each of the following stop outcomes: 1) no action, 2) warning, 3) field interview report, 4) citation, 5) arrest: OVI, 6) arrest: other, and 7) search. Note that although drivers may receive multiple outcomes (e.g., warnings and citations) during a single traffic stop, for 10 months of the year-long data collection period, only the most serious outcome was entered during the data entry process.

Table 3.4, as well as Figure 3.1, report that, department-wide, the most frequent outcome for stopped drivers in 2007 -2008 was being issued a warning (63.3% of all drivers received at least one warning). In addition, approximately 30% of drivers stopped were issued citations. Occurring rarely were the most serious stop outcomes – specifically, arrests (1.4% of drivers stopped were arrested for OVI, 2.3% of drivers stopped were arrested for other reasons) and searches of the drivers, occupants, or vehicles (6.9% of the stops)³. Stops resulting in no action and field interviews are not examined in detail within this report. Figure 3.1 displays the percentage of stops in 2007 - 2008 that resulted in each of these outcomes across the department.

Figure 3.1: Percentage of 2007-2008 Traffic Stops Resulting in Various Outcomes (n=7,378)



³ In an effort to utilize as much information as possible for statistical analyses, an assumption regarding search data has been made. A search was indicated to have occurred in 503 traffic stops. For 4 cases (0.05%), however, that did not indicate that a search was conducted, but a search authority and seizure were listed, an assumption was made that a search was conducted. Therefore, the total number of searches analyzed is 507.

Table 3.4 also provides information about the outcomes of traffic stops at the department and shift level. At the shift level, officers assigned to Shifts 1 and 4 were more likely to cite drivers than officers assigned to Shifts 2 and 3, while drivers stopped by officers assigned to Shifts 2 and 3 were more likely to be issued warnings or have stops result in no action than drivers stopped by officers assigned to Shifts 1 and 4.

Table 3.4 also demonstrates noticeable differences in the patterns of arrest, search, and seizure activity across the four shifts. Possibly due to the nature of their assignment as investigative officers, those assigned to Shift 4 were considerably more likely to arrest drivers they stopped for OVI arrests. Officers assigned to Shifts 2 and 3 also were more likely to arrest drivers than officers assigned to Shift 1, for both OVI and other arrests. Similarly, officers assigned to Shifts 2, 3, and 4 were far more likely to search drivers they stopped compared to officers assigned to Shift 1. In particular, officers assigned to Shift 2 conducted the highest percentage of searches (10.6%) across the department.

It is important to note that some variation across organizational units is to be expected based on differences in traffic patterns and criminality. These analyses cannot determine whether or not the reported differences across shifts reflect or exceed these expectations. That is, these analyses cannot determine whether the differences in post-stop outcomes across shifts are due to normal variations in driver behavior, or represent differential responding patterns across FPD organizational units.

Table 3.4: 2007 – 2008 Traffic Stop Outcomes – Department and Shifts

	Total # of Stops	% No Action	% Warned	% Field Interview Report	% Cited	% Other	% Arrested: OVI	% Arrested: Other	% Searched
Fairfield Police Department	7,378	3.7	63.3	0.3	29.8	0.1	1.4	2.3	6.9
Shift 1 (6:00 am – 2:30 pm)	1,658	0.8	60.0	0.1	39.0	0.1	0.2	0.4	0.5
Shift 2 (2:00 pm – 10:30 pm)	3,414	4.4	63.0	0.2	29.1	0.1	0.9	3.7	10.6
Shift 3 (10:00 pm – 6:30 am)	2,157	5.1	66.8	0.8	23.3	0.1	3.0	1.8	6.0
Shift 4 (8:00 am – 4:00 pm)	148	0.7	54.1	0.0	39.9	0.0	4.1	1.4	3.4

NOTE: Although stops may result in multiple outcomes, for 10 months of the data collection period, only the most serious outcome was entered in the dataset.

DRIVER CHARACTERISTICS

Table 3.5 reports the characteristics of drivers stopped by Fairfield police officers between September 2007 and August 2008. The characteristics of the drivers are grouped as: 1) drivers' age and gender, 2) drivers' race/ ethnicity, and 3) drivers' residency. These characteristics are described at the department and shift levels.

Drivers' Age & Gender

The average age of drivers and the percent of drivers who were male are reported at the department and shift level in Table 3.5. At the department level, the average age of drivers stopped was 35.7 years, which is similar to the individual averages at the shift level, with the exception of Shift 1, which is somewhat higher (40.9 years). Also shown in Table 3.5, across the department, 62.8% of the stopped drivers were male; likewise, males were more likely than females to be stopped by officers assigned to all shifts within the department, although the percentage of males is lowest for stops made by Shift 1 officers.

Drivers' Race & Ethnicity

In addition to age and gender, FPD officers also recorded the racial/ethnic background of drivers. Officers visually determined the racial and ethnic composition of the drivers and these determinations were based solely on officers' perceptions. No drivers were asked for their racial or ethnic category. The reliability and validity of citizens' race involves two related concerns for data collected by the police. First, police may be reluctant to indicate drivers' race or may simply report that information inaccurately. Second, officers may "disengage," or initiate fewer traffic stops overall. Unfortunately, the validity of data collected by police officers often cannot be directly assessed. Data reliability and validity is more likely when field supervisors routinely review the information collected and cross-validate using additional sources of information. Both of these approaches were used by the Fairfield Police Department. In this regard, there is no known reason to question the integrity of the data collection process.

The racial and ethnic descriptions of drivers stopped by officers are reported at the department and shift level in Table 3.5. Officers recorded their perceptions of drivers' race/ethnicity in one of seven categories, with the percentage across the department indicated in parentheses:

- White (74.4%)
- Black (18.6%)
- Hispanic (4.6%)
- Native American (0.1%)
- Asian (1.3%)
- Middle Eastern (0.9%)
- Other/Unknown race/ethnicity (0.1%)

It should be noted that some variation in the racial and ethnic background of drivers stopped across shift levels is to be expected due to differences in the demographic makeup of residents and travelers, as well as differences in traffic flow patterns in these locations. As shown in Table 3.5, variations in the racial/ethnic background of stopped drivers at the shift levels are evident. For example, more than 80% of the drivers stopped by officers assigned to Shift 1 were White, while officers assigned to the other three shifts stopped somewhat higher percentages of minority drivers. Officers assigned to Shift 3, the overnight shift, stopped the highest percentage of Black (23.8%) and Hispanic (5.6%) drivers. The percentages of Native American, Asian, Middle Eastern, and other drivers stopped were extremely low across all organizational units.

Drivers' Residency

Finally, Table 3.5 reports drivers' residency based on reported residential zip codes. For every traffic stop, drivers' zip codes were recorded to determine the percentage of stops that occurred in locations (i.e., state and county) where the drivers actually resided. This is important information to collect because benchmarks based on Census data assume that the driving population is similar to the residential population of an area. As shown in Table 3.5, however, this is an inaccurate assumption for these data. While a majority of stopped drivers stopped department-wide were Ohio residents (95.1%), comparisons to Fairfield Census data would be inappropriate as approximately half of all drivers (48.5%) stopped department-wide were not Fairfield residents. These percentages were fairly consistent across shifts, with Shift 4 stopping the lowest percentage of Fairfield residents (45.9%).

Table 3.5: Citizen Characteristics of 2007 – 2008 Traffic Stops

	Ave. Citizen Age	% Male	% White	% Black	% Hispanic	% Native American	% Asian	% Middle Eastern	% Other	% Fairfield Resident	% Ohio Resident
Fairfield Police Department	35.7	62.8	74.4	18.6	4.6	0.1	1.3	0.9	0.1	51.5	95.1
Shift 1 (6:00 am – 2:30 pm)	40.9	51.8	82.0	13.6	2.4	0.1	1.1	0.9	0.0	50.8	95.5
Shift 2 (2:00 pm – 10:30 pm)	34.8	65.9	75.0	17.6	5.0	0.0	1.3	0.8	0.2	53.8	95.7
Shift 3 (10:00 pm – 6:30 am)	33.1	66.2	67.9	23.8	5.6	0.1	1.3	1.2	0.1	48.9	94.2
Shift 4 (8:00 am – 4:00 pm)	34.1	63.5	71.6	23.0	3.4	0.0	1.4	0.0	0.7	45.9	92.6

SECTION SUMMARY

Section 3 described the methodology for traffic stop data collection, the characteristics of traffic stops, and the characteristics of stopped drivers at the department and shift levels based on data collected from September 1, 2007 through August 31, 2008. The trends in these descriptive findings are summarized below.

- At the department level, 7,378 traffic stops were conducted during this 12 month period spanning 2007 and 2008. These stops had the following characteristics:
 - Occurred on a weekday (68.1%)
 - Occurred during the daytime (51.0%)
 - Occurred during rush hour (33.7%)
 - Majority lasted less than 20 minutes (0-10 min. 80.4%; 11-20 min. 15.5%)
 - August accounted for the highest percentage of stops (12.2%), followed by February and April (10.6% in each) and July (10.4%).
 - Trends varied across the four shifts

- At the department level, the most frequent reasons for the stop included:
 - Prior to the Stop:
 - Speeding Violations (35.8%)
 - Average Amount Over Limit 15.8 miles per hour
 - Moving Violations (25.9%)
 - Equipment Violations (20.5%)
 - Subsequent to the Stop:
 - License / Registration Violations (5.0%)
 - Equipment Violations (1.5%)

- Department-wide, FPD officers stopped drivers with the following characteristics:
 - Average age of 35.7 years
 - Male (62.8%)
 - White (74.4%), Black (18.6%), Hispanic (4.6%), Native American (0.1%), Asian (1.3%), Middle Eastern (0.9%), Other/Unknown race/ethnicity (0.1%)
 - Some variation in the racial and ethnic background of drivers stopped across shifts is to be expected due to differences in the demographic makeup of residents and travelers, along with differences in traffic flow patterns

- Fairfield residents (51.5%), Ohio residents (95.1%)
 - The percentage of Fairfield residents indicates that it is inappropriate to assume residential populations are similar to driving populations – i.e., Census data are not appropriate comparisons for benchmark analyses

4. ANALYSES OF STOP OUTCOMES AND REASONS FOR TRAFFIC STOPS

OVERVIEW

In this section, differences in post-stop outcomes (e.g., warnings, citations, arrests, and searches) and reasons for the stop are examined in greater detail. Specifically, Section 4 includes: 1) analyses of the differences in post-stop outcomes across types of drivers, 2) analyses of the differences in reasons for the stop across types of drivers, and 3) multivariate statistical analyses predicting post-stop outcomes.

Initially, post-stop outcomes for traffic stops conducted during 2007 – 2008 are examined by drivers' race/ethnicity and gender at the department and shift levels. Table 4.1 and Figure 4.1 documents statistically significant differences across racial/ethnic and gender groups for warnings, citations, arrests, and searches across the department and shifts. Thereafter, additional analyses regarding the reasons for the stops were performed. First, the relationship between reason for the stop and stop outcomes is explored in Figures 4.2 and 4.3. Then, the results of analyses examining the relationship between reason for the stop and drivers' race/ethnicity are presented in Figure 4.4 and Table 4.2. Specifically, Figure 4.4 displays the percentages of each of six reasons for the stop: speeding, moving violation, equipment violation, license/registration violation, investigative stop, and LEADS inquiry by drivers' race/ethnicity. Table 4.2 documents, at the department and shift level, statistically significant differences across racial/ethnic and gender groups for each of those six reasons for the stop. Finally, the relationships between driver characteristics, reasons for the stop, and other variables are further explored in multivariate statistical analyses presented in Tables 4.3 – 4.4. These multivariate analyses are designed to examine the independent effect of drivers' race/ethnicity over the likelihood of receiving warnings, citations, arrests, and searches. A description of the multivariate analyses is provided, and the findings are explained that predict these officer actions.

DIFFERENCES IN STOP OUTCOMES ACROSS TYPES OF DRIVERS

Analysis of racial/ethnic differences in post-stop outcomes is an important component of any traffic stop data analysis study because the potential for racial bias in police decision-making is not limited to the initial stopping decision. Indeed, differential treatment based on the drivers' race/ethnicity *after* the initial stop has the potential to be more harmful. Fridell (2004, 2005) notes, that there is some disagreement about what outcomes are more likely to indicate bias; that is, is racial bias more likely at work for more severe outcomes because of their punitiveness, or less severe outcomes because there may not have been based on a legitimate reason for the stop? Researchers disagree; therefore, it is prudent to consider all post-stop outcomes in traffic stop analyses.

A major advantage of examining post-stop outcomes is that, unlike traffic stops where the comparison population is unknown and can only be estimated, the comparison population for post-stop outcomes is known. Having information on the population of all stopped drivers renders the benchmark comparison unnecessary. Because the comparison

population is known, more rigorous statistical and methodological techniques can be applied to understanding disparity in post-stop outcomes.

Upon the discovery of a racial disparity in outcomes, several explanations could exist for such a scenario, including but not limited to, racial bias. A number of other reasons could explain disparate outcomes beyond officer bias toward minorities. For each stop that occurs, there are a multitude of characteristics or variables that can be measured, such as the outcome of the stop (e.g., warning, citation, search, and/or arrest), the characteristics of the driver (e.g., race/ethnicity of the driver, age of the driver, etc.), legal considerations (e.g., the reason for the stop, seriousness of the offense, discovery of contraband, etc.), the characteristics of the officer (e.g., length of service, education level, etc.) and the characteristics of the geographic location where the stop occurred (e.g., crime rate of the neighborhood, racial composition of the neighborhood, etc.). Each of these factors has the potential to have some explanatory power in understanding the complex nature of police-citizen interactions and specifically, post-stop outcomes.

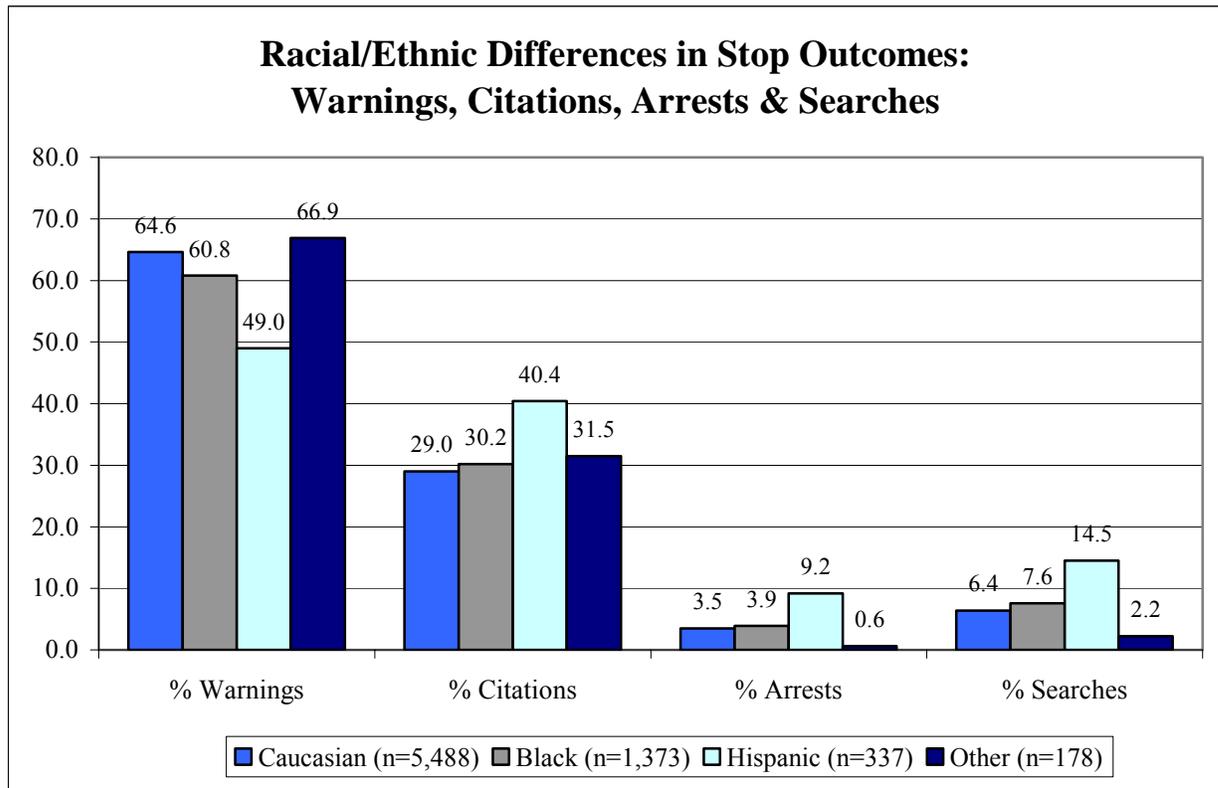
This subsection examines racial/ethnic differences in warnings, citations, arrests, and searches (Table 4.1). For these racial/ethnic comparisons across organizational units, drivers' race is collapsed into four categories – White (non-Hispanic), Black, Hispanic, and Other (including drivers of the following races: Native American, Asian, Middle Eastern, other or unknown). These racial categories are collapsed into one because their total numbers of stops were too small to make racial/gender comparisons across organizational units.

Racial/Ethnic Differences in Warnings, Citations, Arrests & Searches

Figure 4.1 and Table 4.1 present the percentage of drivers warned, cited, arrested, and searched by race/ethnicity and gender categories. Figure 4.1 graphically displays the racial/ethnic differences in warnings, citations, arrests and searches. Table 4.1 reports the following information at the department and shift levels: the total number of stops, the percentage of drivers warned, cited, arrested, and searched by race/ethnicity and gender categories. As shown in Figure 4.1 and Table 4.1, post-stop outcomes varied significantly by drivers' race and gender at the department level in 2007 – 2008.

As shown in Figure 4.1 and Table 4.1 at the department level, Hispanic drivers were the least likely to be issued warnings (49.0% of stops) compared to Other (66.9%), White (64.6%), and Black (60.8%) drivers. Hispanics also received the highest percentage of citations (40.4%), while Whites were the least likely to receive citations (29.0%) compared to Blacks (30.2%) and Other drivers (31.5%). Racial/ethnic differences in arrests and searches were also evident. Hispanic drivers were significantly more likely than White drivers to be arrested and searched. Specifically, 9.2% of Hispanic drivers were arrested compared to 3.5% and 3.9% of White and Black drivers, respectively. Similarly, while 14.5% of Hispanic drivers were searched, only 6.4% of White drivers were subjected to searches. Drivers of other races were the least likely to be arrested (0.6%) or searched (2.2%).

Figure 4.1: Racial/Ethnic Differences in Stop Outcomes: Warnings, Citations, Arrests & Searches



NOTE: Racial/ethnic differences shown are statistically significant at $p < .001$.

As shown in Table 4.1, at the shift level, Hispanics were the least likely to be warned across all four shifts, although the differences are only statistically significant for Shifts 1 - 3. The only statistically significant racial/ethnic difference in citations is evident for Shift 2. Hispanics (45.3%) were significantly more likely to be cited by officers assigned to Shift 2 in comparison to Whites, Blacks, and Other drivers. For arrests, Shifts 1 and 3 show that Hispanics were significantly more likely than all other racial/ethnic groups to be arrested. Shifts 2 and 4, however, show no statistically significant differences. While the sample size may contribute to the lack of statistical significance for Shift 4, this is not the case for Shift 2, where the arrest rates for Whites, Blacks, and Hispanics were all very similar. At the shift level, the search rate patterns are fairly similar to the departmental trend. Specifically, for Shifts 1 – 3, Hispanics were significantly more likely to be searched than White, Black, and other drivers.

Gender differences for 2007 - 2008 stop outcomes are also displayed in Table 4.1. At the department level, no significant differences existed between male and female drivers' likelihood of receiving warnings and citations. Male drivers were, however, significantly more likely to be arrested (4.9% of stops) and searched (9.4%) compared to female drivers (1.8% arrested, and 2.7% searched). At the shift level, the only statistically significant differences evident are for arrest and search rates by officers assigned to Shifts

2 and 3. Specifically, mirroring the trend at the department level, males were significantly more likely to be arrested and searched than females.

Table 4.1: 2007 – 2008 Stop Outcomes by Race and Gender for Department and Shifts

	Drivers	Total # of stops	% drivers warned	% drivers cited	% drivers arrested	% drivers searched
Fairfield Police Dept	White	5,488	64.6***	29.0***	3.5***	6.4***
	Black	1,373	60.8	30.2	3.9	7.6
	Hispanic	337	49.0	40.4	9.2	14.5
	Other	178	66.9	31.5	0.6	2.2
	Male	4,628	62.6	29.1	4.9***	9.4***
	Female	2,746	64.4	31.0	1.8	2.7
Shift 1 (6:00 am – 2:30 pm)	White	1,358	59.6*	39.2	0.4***	0.3***
	Black	226	65.9	34.1	0.0	0.4
	Hispanic	39	41.0	51.3	12.8	10.3
	Other	34	58.8	44.1	0.0	0.0
	Male	858	60.0	38.0	0.9	0.8
	Female	798	60.0	40.0	0.3	0.3
Shift 2 (2:00 pm – 10:30 pm)	White	2,560	65.0***	27.3***	4.6	10.5*
	Black	600	57.8	32.2	4.7	11.0
	Hispanic	172	48.3	45.3	5.8	14.5
	Other	82	68.3	28.0	1.2	2.4
	Male	2,249	62.4	28.5	5.9***	14.1***
	Female	1,165	64.2	30.2	2.1	3.9
Shift 3 (10:00 pm – 6:30 am)	White	1,463	69.2***	21.8	4.2***	4.9***
	Black	513	62.4	25.7	4.9	7.0
	Hispanic	121	53.7	28.9	12.4	16.5
	Other	59	71.2	27.1	0.0	3.4
	Male	1,427	64.9**	24.2	5.7**	7.4***
	Female	728	70.5	21.6	2.7	3.3
Shift 4 (8:00 am – 4:00 pm)	White	106	55.7	38.7	5.7	3.8
	Black	34	55.9	38.2	2.9	2.9
	Hispanic	5	20.0	60.0	20.0	0.0
	Other	3	33.3	66.7	0.0	0.0
	Male	94	54.3	39.4	5.3	3.2
	Female	54	53.7	40.7	5.6	3.7

NOTE: Asterisks indicate statistically significant chi-square associations across 4 racial groups and 2 gender groups. *** $p \leq .001$ ** $p \leq .01$ * $p \leq .05$

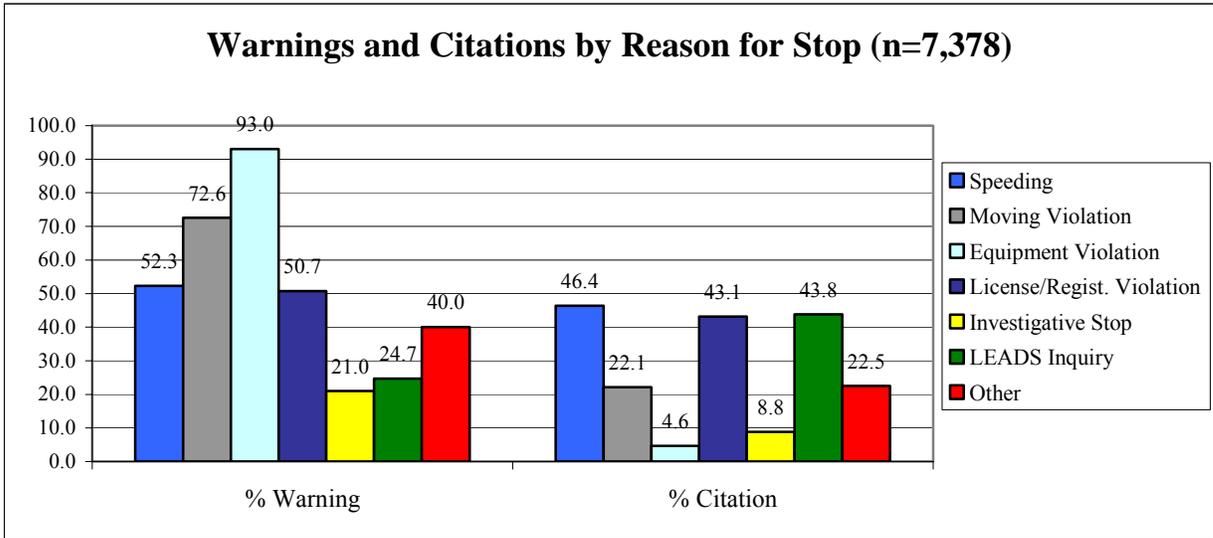
As shown in Figure 4.1 and Table 4.1, the majority of these racial/ethnic differences in stop outcomes are statistically significant based on a 0.001 level chi-square analysis. That is, the differences noted are likely due to chance no more than 0.1% of the time. Based solely on the statistical significance, these results suggest that a difference exists in the likelihood of receiving various stop outcomes depending on the race/ethnicity of the driver. It is important to recognize, however, that chi-square analyses do not consider other variables when determining statistical significance. That is, the chi-square test does not measure other factors potentially associated with the likelihood of receiving particular stop outcomes; rather, it only considers the race/ethnicity of the driver. Consequently, the results of these analyses cannot determine whether or not differences in outcomes across racial/ethnic groups are due to officer bias and should be interpreted with some caution. Further, the multivariate models must be examined prior to reaching conclusions regarding the relationship between race of the driver and post-stop outcomes.

DIFFERENCES IN REASONS FOR THE STOP ACROSS STOP OUTCOMES & TYPES OF DRIVERS

It is possible that certain types of stops may be more likely to result in certain outcomes. For example, an equipment violation might be more likely to result in a warning than a citation. If particular racial/ethnic groups are more likely to be stopped for reasons that are correlated with particular outcomes, then the reason for the stop is a potentially important intervening variable in explaining the racial/ethnic disparity in outcomes. In an effort to better understand factors that influence whether or not drivers receive particular outcomes, additional analyses regarding the reasons for the stops were performed. First, the relationship between reason for the stop and stop outcomes is explored. Following that, analyses are reported that examine the relationship between reason for the stop and drivers' race/ethnicity and gender.

Figures 4.2 – 4.3 explore the possibility that stops for particular reasons are more likely to result in specific outcomes. Figure 4.2 below shows the percentage of stops resulting in warnings and citations for each reason for the stop (both prior to and subsequent to). As shown, stops made for equipment violations were significantly more likely (93.0%) than all other reasons for the stop to result in warnings, while stops for investigatory reasons (21.0%) and LEADS inquiries (24.7%) were least likely to result in warnings. Also shown in Figure 4.2, stops based on speeding violations, license/registration violations, and LEADS inquiries were all significantly more likely than other reasons for the stop to result in citations.

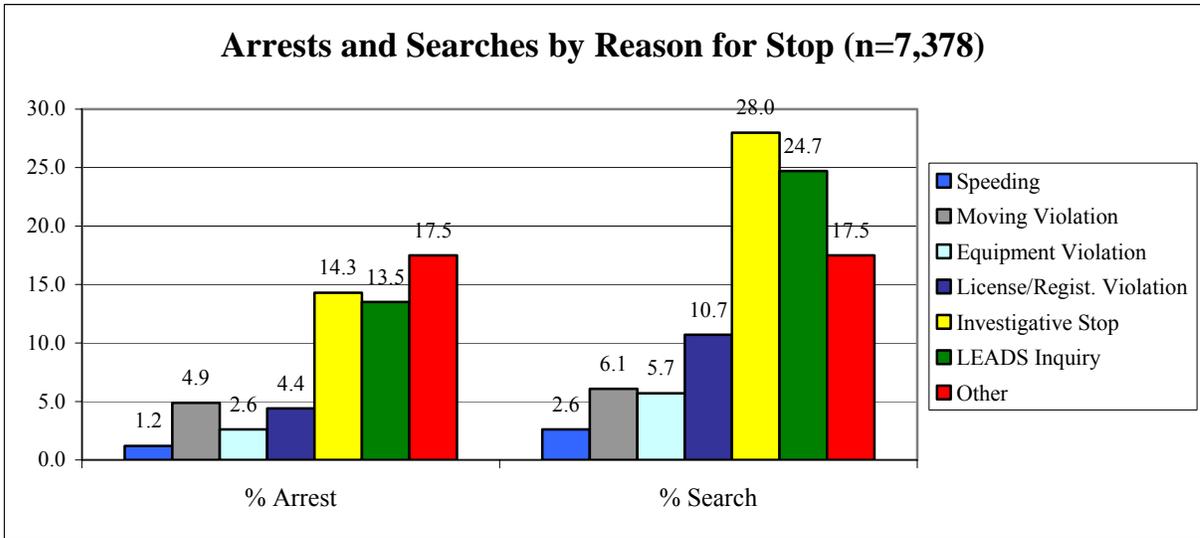
Figure 4.2: Warnings and Citations by Reason for Stop (n=7,378)



NOTE: The differences shown in this figure are statistically significant at $p < .001$.

Likewise, Figure 4.3 below shows the percentage of stops resulting in arrests and searches for each reason for the stop (both prior to and subsequent to). As shown, stops made for investigative reasons, LEADS inquiries, and other reasons were significantly more likely (14.3%, 13.5%, and 17.5%, respectively) than all other reasons for the stop to result in arrests, while stops for speeding violations and equipment violations rarely resulted in arrests (1.2% and 2.6%, respectively). Similarly, Figure 4.3 also shows that stops based on investigative reasons, LEADS inquiries, other reasons, and license/registration violations were all significantly more likely than speeding, moving, and equipment violations to result in searches.

Figure 4.3: Arrests and Searches by Reason for Stop (n=7,378)



NOTE: The differences shown in this figure are statistically significant at $p < .001$.

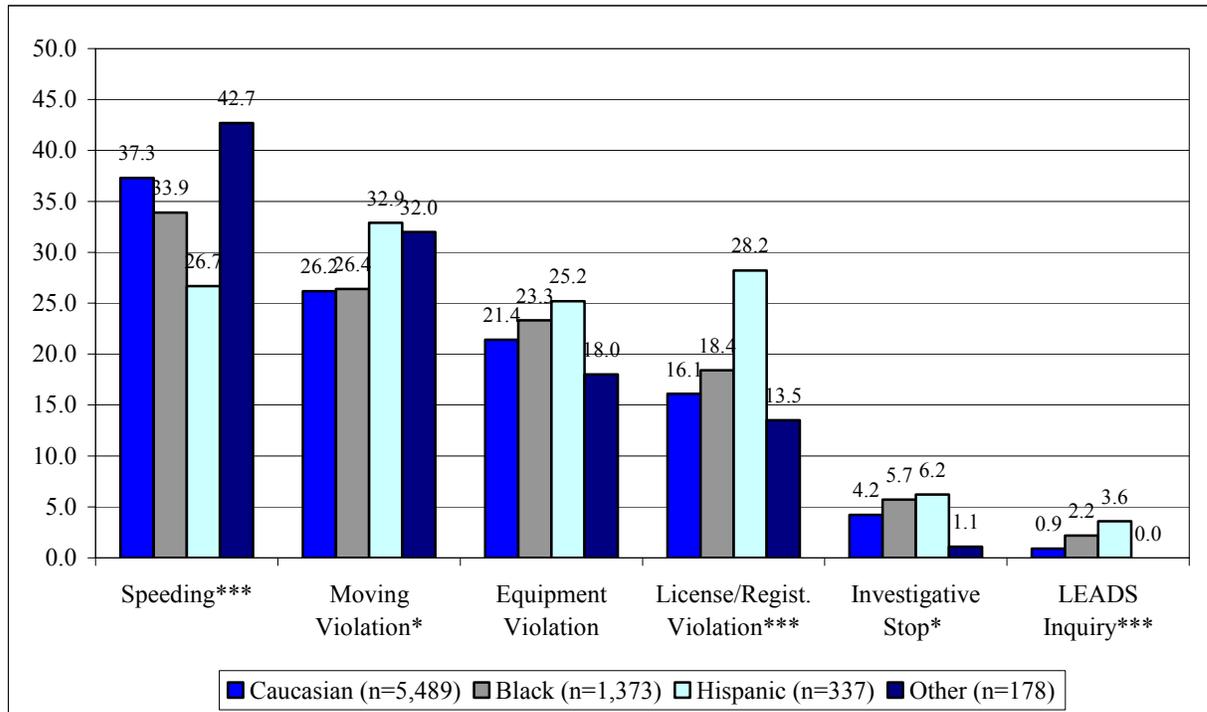
As shown in Figures 4.2 and 4.3, the reason for the stop is clearly related to the likelihood of particular outcomes. If particular racial/ethnic groups are more likely to be stopped for particular reasons, then it is possible that disparities in outcomes evident above might be accounted for by legal variables. Figure 4.4 and Table 4.2 below examine the reasons for stops (reasons both prior to and subsequent to a stop) by drivers' race/ethnicity.⁴ As shown, racial/ethnic differences are evident for all reasons for the stop other than equipment violations. Drivers of Other races (Native Americans, Asians, Middle Easterners, and other minorities) were significantly more likely (42.7%) to be stopped overall for speeding compared to Whites (37.3%), Blacks (33.9), and Hispanics (26.7%), while Hispanics were the least likely to be stopped for speeding. Hispanics (32.9%) and Other drivers (32.0%) were significantly more likely than Whites (26.2%) and Blacks (26.4%) to be stopped for moving violations.

Figure 4.3 also shows that, overall, Hispanics (28.2%) were significantly more likely to have license/registration violations as a reason for the stop compared to all other racial/ethnic groups. These results provide some support for the proposition that minority drivers are more likely to be stopped for violations that are indirectly linked to income. For example, infractions for registrations / license plates and drivers' licenses have an economic component. In addition, the high percentage of Hispanic drivers stopped for license/registration violations may be related to illegal immigration status.

For stops due to investigatory reasons, Blacks (5.7%) and Hispanics (6.2%) were the most likely to be stopped for these reasons, while drivers of Other races were the least likely (1.1%). Similarly, Blacks (2.2%) and Hispanics (3.6%) were significantly more likely than Whites (0.9%) and Other drivers (0.0%) to be stopped based on LEADS inquiries as well.

⁴ Analyses separately examining reasons "prior to the stop" compared to "subsequent to stop" were also conducted, but are not reported. These analyses are available from the author upon request.

Figure 4.4: Racial/Ethnic Differences in Reasons for the Stop: Prior to and Subsequent to the Stop



NOTE: Asterisks indicate statistically significant chi-square associations across 4 racial groups.
 *** $p \leq .001$ ** $p \leq .01$ * $p \leq .05$

Table 4.2 also documents, at the shift level, statistically significant differences across racial/ethnic and gender groups for each reason for the stop. For Shifts 1 and 4, the only statistically significant racial/ethnic difference is evident for stops made for license/registration violations. Consistent with the findings at the department level, Hispanics were significantly more likely to have license/registration violations as a reason for the stop compared to all other racial/ethnic groups. Note, however, that the small number of Hispanic drivers stopped by officers during Shift 1 and 4 make interpretation of these results difficult. The same patterns also exist for Shifts 2 and 3, and these shifts do have enough stops of Hispanic motorists to more clearly interpret the results.

Other racial/ethnic differences in reasons for the stop are evident for Shifts 2 and 3. For Shift 3, Hispanics were significantly more likely than all other racial/ethnic groups to be stopped for moving violations and investigatory reasons. Racial/ethnic differences in stops for equipment violations are also evident for Shifts 2 and 3, although the results differ. For Shift 2, Hispanics were significantly more likely to be stopped for equipment violations than all other racial/ethnic groups, while for Shift 3, Hispanics were the least likely to be stopped for these types of violations. Finally, for both Shift 2 and 3, Blacks and Hispanics were significantly more likely than Whites and Other drivers to be stopped due to LEADS inquiries and other reasons.

Table 4.2: 2007 – 2008 Reasons for the Stop by Race and Gender for Department and Shifts: Prior to & Subsequent to Stop

	Drivers	Total # of stops	% Speeding	% Moving Viol.	% Equip. Viol.	% License / Regist.	% Investig. Stop	% LEADS Inquiry	% Other Reason
Fairfield Police Dept	White	5,489	37.3***	26.2*	21.4	16.1***	4.2**	0.9***	0.6***
	Black	1,373	33.9	26.4	23.3	18.4	5.7	2.2	1.5
	Hispanic	337	26.7	32.9	25.2	28.2	6.2	3.6	2.1
	Other	178	42.7	32.0	18.0	13.5	1.1	0.0	0.6
	Male	4,629	33.1***	27.8**	23.2***	18.2***	5.2***	1.3	0.9
	Female	2,746	41.6	24.8	19.5	15.0	3.2	1.0	0.6
Shift 1 (6:00 am – 2:30 pm)	White	1,358	57.9	28.4	7.6	8.2***	0.6	0.1	0.7
	Black	226	53.1	30.1	8.4	13.3	0.9	0.4	0.4
	Hispanic	39	53.8	30.8	10.3	30.8	0.0	0.0	2.6
	Other	34	70.6	23.5	5.9	2.9	0.0	0.0	2.9
	Male	858	53.5***	33.9***	6.5**	9.8	0.7	0.3	0.9
	Female	798	61.5	23.1	8.9	8.8	0.5	0.0	0.5
Shift 2 (2:00 pm – 10:30 pm)	White	2,560	26.5	27.0	21.4**	24.4*	4.9	1.4***	0.5*
	Black	600	25.2	26.5	22.3	25.7	6.0	3.7	1.5
	Hispanic	172	19.8	28.5	32.0	33.7	4.1	5.2	1.2
	Other	82	31.7	35.4	14.6	20.7	2.4	0.0	0.0
	Male	2,249	23.4***	26.5	24.5***	26.1*	5.9***	2.1	0.7
	Female	1,165	31.1	28.5	16.9	23.0	3.2	1.7	0.7
Shift 3 (10:00 pm – 6:30 am)	White	1,464	34.2	23.8***	35.2**	9.3**	6.4**	0.5*	0.5*
	Black	513	33.5	25.3	32.0	12.1	7.6	1.4	1.8
	Hispanic	121	26.4	39.7	21.5	18.2	11.6	2.5	2.5
	Other	59	39.0	33.9	30.5	8.5	0.0	0.0	0.0
	Male	1,428	33.5	27.2**	32.1*	11.0	7.1	0.7	1.1
	Female	728	34.1	21.6	36.4	9.3	6.2	1.1	0.5
Shift 4 (8:00 am – 4:00 pm)	White	106	76.4	10.4	6.6	8.5**	1.9	0.0	1.9
	Black	34	64.7	14.7	8.8	20.6	2.9	0.0	2.9
	Hispanic	5	60.0	40.0	0.0	60.0	0.0	0.0	20.0
	Other	3	100.0	0.0	0.0	33.3	0.0	0.0	0.0
	Male	94	72.3	11.7	7.4	14.9	1.1	0.0	3.2
	Female	54	75.9	13.0	5.6	11.1	3.7	0.0	1.9

NOTE: Asterisks indicate statistically significant chi-square associations across 4 racial groups and 2 gender groups. *** p ≤ .001 ** p ≤ .01 * p ≤ .05

Given the findings presented in these bivariate analyses, it is plausible that racial/ethnic and gender differences in post-stop outcomes exist due to legal reasons. To explore these possibilities, more advanced statistical analyses that control for legally relevant variables are presented below. The information reported in Tables 4.1 - 4.2 and Figures 4.1 – 4.4 is included in this report solely to provide details to FPD administrators regarding differences in post-stop outcomes at the department and shift. Although this information will allow FPD administrators to identify potential problems and target specific shifts for policy interventions, it should not be the sole information used to examine whether or not bias practices exist.

MULTIVARIATE ANALYSES

A multivariate statistical model is one that takes many different factors into account when attempting to explain a particular behavior. Unlike a bivariate model, which simply assesses the relationship between two variables, a multivariate model examines many variables simultaneously, and therefore provides a more thorough and accurate interpretation of the data. In other words, the individual impact of one variable on the outcome can be measured while considering all of the other variables simultaneously.

When a multivariate analysis includes other likely factors that influence stop outcomes and disparity remains, then we can have more confidence in the possibility that racial bias is at work (Fridell, 2004, 2005). Importantly, however, it still cannot be said with certainty that racial disparity in stop outcomes reflects officer bias. That is, although multivariate analysis is a stronger analytical strategy than traffic stop comparisons to benchmark data or bivariate analysis, it is not without its limitations. The key weakness of multivariate statistical analysis is that it can only statistically control for those variables that are measured. This is called “specification error” or the error in a statistical model due to the inability to specify all of the factors that might have an influence over the outcome (in this case, officers’ behavior). Due to issues associated with specification error, the results from the multivariate models must be interpreted with caution. Researchers generally note the explanatory factors that are not or could not be measured, and speculate about their possible impact on the results. Despite these limitations, researchers can generally be more confident in the findings of multivariate models that examine traffic stop dispositions because at least some legal and extralegal factors that contribute to officer decision-making are statistically controlled.

In Tables 4.3 - 4.4, the results of four multivariate models are presented. These multivariate analyses examine the associations between drivers’ characteristics and four post-stop outcomes (i.e., warnings, citations, arrests, and searches) when other characteristics likely associated with these outcomes are statistically controlled.

Many factors other than drivers’ race/ethnicity are likely to influence officers’ decision making once a traffic stop has been made. For example, other driver characteristics (e.g., drivers’ gender, age, residency), vehicle characteristics (e.g., registration, type of vehicle), stop characteristics (e.g., time of day, day of the week, season), reasons for the stop (moving violations, non-moving violations, equipment violations, etc.), and other

legal variables (e.g., evidence found during a search) have all been hypothesized to influence post-stop outcomes. Multivariate analyses allow the examination of the effects of each of these predictor variables, while controlling for the influence of the remaining variables. For example, the influence of drivers' race can be examined while holding constant the predictive power of drivers' age, reason for the stop, time of day, etc.⁵ The multivariate analyses below examine the following specific variables for their influence over post-stop outcomes:

- Driver characteristics: race/ethnicity (dichotomous variables – White, Hispanic, Black, Other; White is the excluded comparison category), gender (1=male), age (in years), Fairfield residency (1=yes), Ohio residency (1=yes).
- Stop characteristics: time of day (1=night), rush hour (1=yes), day of the week (1=weekend), season (dichotomous variables – spring, fall, summer, winter; winter is excluded comparison category)
- Legal variables: primary reason for the stop (dichotomous variables – speeding violation, moving violation, equipment violation, license/registration violation, investigatory stop, and LEADS inquiry; speeding violations is the excluded comparison category), whether there was a subsequent reason for the stop (1=yes),⁶ evidence found during a search (evidence=1)

Understanding and Interpreting Multivariate Analyses

Table 4.3 presents the results of two logistic regression models predicting warnings and citations issued to drivers during officer-initiated traffic stops in 2007 - 2008. Table 4.4 presents results for similar logistic regression analyses predicting arrests and searches. These models demonstrate what factors likely influence officer decision making when other factors are equal. That is, the effects of drivers' race/ethnicity over the likelihood of being issued warnings, citations, arrests or searches are isolated. A statistically

⁵ Other characteristics are also believed to potentially influence officer decision making, including officer characteristics (e.g., sex, race, experience, education, assignment), organizational characteristics (e.g., number of officers assigned to shift, % canine handlers assigned to area, % minority officers assigned to shift, etc.), and community characteristics where the stop occurred (e.g., residential population, poverty, factors related to traffic patterns, etc.). The inclusion of community characteristics, organizational characteristics, and individual officer characteristics in the analyses introduces additional statistical complexity with the use of data at two levels of aggregation. Therefore, the application of a specialized statistical program called hierarchical linear and nonlinear modeling (HLM) would be required. Due to data limitations, I cannot explore all the possible factors that may influence traffic stop outcomes. Specifically, although the data includes employee demographic information, there is too little variation on these variables to examine statistically. Further, the community characteristics would have to be assessed at the census tract level and there are some areas with too few stops to examine statistically in a hierarchical linear model.

⁶ Ideally the multivariate analysis would also include a variable that accounted for situations in which there were multiple reasons for the stop to capture the seriousness of the stop. Although the data collection form allowed for the collection of all infractions observed prior and subsequent to the stop, when the data was entered into the database, only the most severe reason was captured. While the data entry clerk indicated that multiple entries were rare, they were not systematically captured. Therefore, as described above, the analysis includes a dichotomous variable indicating whether or not a subsequent reason for the stop was indicated. This somewhat diminishes the ability to measure the seriousness of motorists' violations.

significant finding on race/ethnicity would indicate that Hispanic and/or Black motorists are significantly more likely to be given warnings, citations, arrested, or searched compared to Whites in similar situations (e.g., traveling during the same times, stopped for the same initial reasons, etc.). In addition, the Exp(b) is calculated and reported as a measure of the log odds – this is loosely translated into the number of times more likely drivers with the given characteristic are to receive the particular outcome compared to others.

For each of the models reported in Tables 4.3 – 4.4, several independent variables were included that could potentially influence officer actions. As shown in the left hand column, the predictor variables include: 1) driver characteristics, 2) stop characteristics, and 3) legal variables. It is believed that each of these variables has the potential to influence officer behavior, and therefore must be statistically controlled to examine our variables of interest (i.e., drivers' race/ethnicity).

Each of the independent variables is assessed relative to their effect upon the post-stop outcome being examined. It is important to note, though, that some variables are excluded from the model for comparison purposes. For example, the drivers' race is captured in the model as Hispanic, Black, and Other. The "other" category includes Native American, Asian/Pacific Islander, Middle Eastern, Other, and Undetermined. White is excluded from the model for comparison purposes. That is, the influence of the other race/ethnic variables that are reported in the models is in comparison to Whites; e.g., the likelihood of Black drivers being issued a citation compared to White drivers. The other dichotomous variables in the models are simply compared against their opposite (e.g., male drivers are compared to female drivers).

The first column in each model reported in Tables 4.3 – 4.4 displays the variable coefficient, or predicted log-odds, for each independent variable. The coefficient represents an additive expression of a particular variable. In the "coefficient" column, there are two things to examine: 1) the presence of an asterisk following the coefficient indicating a statistically significant relationship, and 2) the presence of a negative sign preceding the number. The asterisk reveals whether or not a significant relationship exists between the independent variable (e.g., male drivers) and the dependent variable (e.g., issuing a warning). If an asterisk is not present, the relationship is not considered statistically significant. The asterisks, depending on how many there are, indicate that the relationships between variables are due to chance less than 5%, 1%, or 0.1% of the time. The sign of the coefficient (i.e., positive or negative) indicates the direction of the relationship. For example, a positive sign on the "driver male" variable would indicate that male drivers are *more* likely than female drivers to receive a particular outcome, while a negative sign would indicate that males are *less* likely than females to receive a particular outcome.

Because the interpretation of log-odds is not intuitively straightforward, this type of coefficient is usually exponentiated to allow for interpretation in terms of odds (Liao, 1994). The second column—the odds ratio—represents this antilog transformation of the coefficient into the multiplicative odds of the outcome variable based on the predictor

variable, all being equal. The odds ratio indicates the strength of the relationship. For example, an odds ratio of 3.0 indicates that the presence of the variable (e.g., being a male driver) leads to three times the likelihood of receiving the outcome (e.g., receiving a citation). The strength of the relationship is one of the most important considerations. Even if the relationship between variables is statistically significant, it may not be substantively important. That is, the strength of the relationship may not be very large, and therefore, the odds ratio is important to consider when determining the amount of influence particular factors have over the post-stop outcomes.

In summary, to interpret the multivariate models:

- 1) Check the sign in the coefficient column – if positive then the variable contributes positively to the outcome, if negative, the variable contributes negatively (e.g., positive sign indicates Hispanics are more likely to receive an outcome, minus sign indicates Hispanics are less likely to receive outcome).
- 2) If there is an asterisk following the coefficient, it is a statistically significant relationship (i.e., due to chance less than 5.0%, 1.0%, or 0.1% of the time).
- 3) The odds ratio indicates the strength of the relationship – 1.5 indicates Hispanics are 1.5 times more likely to receive the outcome.

Multivariate Findings

Table 4.3 reports results for logistic regression models predicting whether or not drivers received warnings (first two columns) or citations (last two columns). The statistical model predicting warnings explains over 26% of the variance (Nagelkerke R-Square = 0.264). That is, about 26% of the variation in whether or not drivers receive warnings can be predicted with this group of factors. During traffic stops in 2007-2008, Hispanic drivers were significantly *less* likely compared to Whites to receive warnings. Specifically, Hispanics were 1.7 times less likely than Whites to receive warnings all other factors being equal. The odds ratio for the Hispanic effect indicates a moderate relationship between a Hispanic driver and the likelihood of receiving a warning. In contrast Black motorists were not statistically significantly more or less likely than Whites to receive warnings. The majority of the other driver characteristics are not statistically significant predictors of the probability of receiving a warning, and although age significantly predicts warnings, its influence is very weak. Drivers stopped at night or in the spring were significantly more likely than those stopped during the daytime and winter to receive warnings, but the odds ratios for these variables indicate these are only marginal relationships. Drivers stopped during rush hour were significantly less likely to be issued a warning compared to drivers stopped during non-rush hour times. Again, however, this is a fairly weak relationship. In contrast, the strongest predictors of whether or not drivers receive warnings were the reasons for the stop. For example, those stopped for an equipment violation prior to the stop were 10.4 times more likely to receive a warning than those stopped for speeding, while drivers stopped prior to the stop for investigatory reasons or a LEADS inquiry were 4.3 and 3.3 times less likely to receive a warning than those stopped for speeding. Similarly, drivers stopped who had

additional violations discovered subsequent to the stop were 4.4 times significantly less likely to be issued a warning than those with no subsequent violations.

The citation model explains 25.4% of the variance in predicting whether or not citations are issued. As with the model for warnings, the model for citations is influenced primarily by the reasons for the stop. Drivers stopped for equipment violations were 13.2 times less likely to receive a citation compared to drivers stopped for speeding violations, while drivers who had an additional violation discovered subsequent to the stop were 5.2 times significantly more likely to be issued a citation than those with no subsequent violations. Despite the strength of the variables measuring legal reasons for the stop, Hispanic drivers were still 1.6 times significantly more likely to receive citations compared to White drivers, all else equal. In contrast Black motorists were not statistically significantly more likely than Whites to receive citations. As with the model for warnings, none of the other driver characteristics are substantively important predictors of the likelihood of receiving a citation. In contrast to the model for warnings, drivers stopped at night or in the spring were 1.5 and 1.4 times significantly less likely than those stopped during the daytime and winter to receive citations.

Table 4.1: Multivariate Analyses Predicting WARNINGS and CITATIONS during officer-initiated traffic stops in 2007 - 2008

Variables	WARNINGS (n=7,346)		CITATIONS (n=7,346)	
	Coefficient	Odds ratio Exp(b) or 1/Exp(b)	Coefficient	Odds Ratio Exp (b) or 1/Exp (b)
Intercept	-0.49**	1.63	0.44*	1.55
<u>Driver Characteristics</u>				
Black	-0.12	--	0.10	--
Hispanic	-0.54***	1.72	0.49***	1.63
Other Race	0.07	--	0.09	--
Male	-0.07	--	-0.02	--
Age	0.02***	1.02	-0.02***	1.02
Fairfield resident	-0.02	--	-0.02	--
OH resident	-0.11	--	0.17	--
<u>Stop Characteristics</u>				
Night-time	0.21***	1.24	-0.39***	1.48
Rush Hour	-0.14*	1.15	0.19**	1.21
Weekend	-0.09	--	-0.02	--
Spring	0.26***	1.30	-0.32***	1.38
Summer	-0.04	--	0.09	--
Fall	-0.06	--	-0.00	--
Number of passengers	0.05	--	-0.04*	--
<u>Legal variables</u>				
Primary reason for stop: moving violation	0.93***	2.54	-1.14***	3.13
Primary reason for stop: equipment violation	2.34***	10.43	-2.58***	13.20
Primary reason for stop: license/registration violation	0.36***	1.43	-0.67***	1.95
Primary reason for stop: investigation	-1.45***	4.26	-2.32***	10.18
Primary reason for stop: LEADS inquiry	-1.19***	3.29	-0.67*	1.95
Violations observed subsequent to stop	-1.49***	4.44	1.64***	5.17
Evidence found during search	-0.01***	1.01	0.00***	1.00
Model Chi-square	1574.60***		1449.95***	
Nagelkerke R Square	.264		.254	

NOTE: Asterisks indicate statistically significant relationships. *** $p \leq .001$ ** $p \leq .01$ * $p \leq .05$

Table 4.4 documents the statistical models predicting arrests and searches. The arrest model displayed in Table 4.4 demonstrates that 18.2% of the variance in arrest can be explained by these factors. The strongest factors predicting arrest are the legal reasons for the stop. For example, drivers stopped for an investigatory stop or LEADS inquiry were 4.8 and 5.7 times more likely to be searched than drivers stopped for speeding violations. In addition, drivers stopped who had additional violations discovered subsequent to the stop were 2.9 times significantly more likely to be arrested than those with no subsequent violations. Although there was a statistically significant and strong bivariate relationship between race/ethnicity and arrest, once the other factors in the model are controlled, none of the race/ethnicity variables are statistically significant predictors of the likelihood of arrest. ***Given similar circumstances, White, Black, and Hispanic motorists are statistically equally likely to be arrested.*** Driver gender, however, does have a statistically significant influence on the likelihood of arrest. Specifically, male drivers were 2.4 times more likely to be arrested than their female counterparts. Finally, arrests were significantly more likely during stops at night and during the summer, compared to stops during the day and the winter.⁷

The search model in Table 4.4 explains 19.8% of the variation in whether or not searches are conducted. Interestingly, despite a statistically significant and strong bivariate relationship between race/ethnicity and search, none of the race/ethnicity variables are statistically significant predictors of the likelihood of a search once the other factors in the model are controlled. That is, much like the arrest model, ***White, Black, and Hispanic motorists are statistically equally likely to be searched given similar circumstances.*** Other driver characteristics do have statistically significant and substantive relationships with the likelihood of a search. Specifically, male drivers and Ohio residents are 3.5 and 2.2 times more likely to be searched, respectively, than their female and out-of-state counterparts. Furthermore, as with the previous multivariate models, the legal reasons for the stop are the strongest predictors of the likelihood of a search. For example, drivers stopped for an investigatory stop or LEADS inquiry were 7.8 and 5.9 times more likely to be searched than drivers stopped for speeding violations. In addition, drivers stopped who had additional violations discovered subsequent to the stop were 2.5 times significantly more likely to be searched than those with no subsequent violations. In addition to the variables included in the model, it is likely that additional factors (e.g., indicators of suspicion, demeanor, etc.) unmeasured by the available data are important variables for explaining whether or not drivers are searched.

⁷ In addition to modeling the likelihood of “any arrest” we also examined a model that excluded OVI arrests based on the presumption that these arrests involve low officer discretion. The results were very similar, in that the legal reasons for the stop were the strongest predictors of arrest, while driver race/ethnicity did not significantly predict arrest.

Table 4.2: Multivariate Analyses Predicting ARRESTS and SEARCHES during traffic stops in 2007 - 2008.

Variables	ARRESTS (n=7,346)		SEARCHES (n=7,346)	
	Coefficient	Odds Ratio Exp (b) or 1/Exp (b)	Coefficient	Odds Ratio Exp (b) or 1/Exp (b)
Intercept	-4.98***	145.47	-3.75***	42.52
<u>Driver Characteristics</u>				
Black	-0.15	--	-0.02	--
Hispanic	0.37	--	0.28	--
Other Race	-1.85	--	-0.93	--
Male	0.87***	2.38	1.24***	3.46
Age	-0.03***	1.03	-0.05***	1.05
Fairfield resident	0.21	--	0.03	--
OH resident	0.54	--	0.80*	2.22
<u>Stop Characteristics</u>				
Night-time	0.51**	1.66	0.03	--
Rush Hour	0.02	--	0.25*	1.29
Weekend	0.39**	1.47	0.21*	1.23
Spring	0.36*	1.44	0.04	--
Summer	0.98***	2.66	-0.12	--
Fall	0.34	--	0.15	--
Number of passengers	0.07	--	0.19***	1.21
<u>Legal variables</u>				
Reason for stop: moving violation	0.95***	2.59	0.61***	1.84
Reason for stop: equipment violation	0.38	--	0.45***	1.57
Reason for stop: license/registration violation	0.44	--	0.87***	2.39
Reason for stop: investigation	1.56***	4.78	2.05***	7.75
Reason for stop: LEADS inquiry	1.75***	5.74	1.78***	5.94
Violations observed subsequent to stop	1.06***	2.90	0.93***	2.54
Evidence found during search	0.03***	1.03	--	--
Model Chi-square	373.69***		597.30***	
Nagelkerke R Square	.182		.198	

NOTE: Asterisks indicate statistically significant relationships. *** p ≤ .001 ** p ≤ .01 * p ≤ .05

In summary, there were no statistically significant differences in outcomes received by White and Black motorists when other factors known to influence officer decision making were examined. Black motorists were equally likely to be issued warnings, citations, arrested, and searched compared to White motorists in similar situations. Hispanic motorists, however, were significantly less likely than White motorists to be issued warnings and significantly more likely to be issued citations. There are several possible reasons for these disparities that cannot be examined with these data, including but not limited to: multiple infractions during traffic stops, severity of the offenses, demeanor of Hispanic drivers, socio-economic status, and officer bias. ***The analyses documented in this report demonstrate that the outcomes received by White and Black motorists during officer-initiated traffic stops conducted between Sept 1, 2007 and August 31, 2008 are not significantly different from one another. This report also demonstrates that Hispanic motorists are significantly more likely than Whites to be issued citations during similar traffic stops, but cannot determine why this disparity exists.***

SECTION SUMMARY

This summary highlights the findings of racial/ethnic disparities in reasons for the stop and post stop outcomes for drivers stopped in 2007 - 2008. When reviewing these results, it is important to remember that the bivariate analyses only consider two variables at a time (e.g., the race of the driver and the post-stop outcome). As a result, the interpretation of these findings should be made with caution and cannot determine the existence of racial bias. The multivariate analyses are better suited to make substantive claims about the results of the post-stop outcomes due to their consideration of more than one factor simultaneously. Nevertheless, the multivariate analyses are limited by the type and amount of data collected. Thus, multivariate analyses can demonstrate racial/ethnic disparities that exist after statistically controlling for other factors that might influence officer decision making that are measured with these data.

Bivariate Analyses – Differences in Outcomes across Types of Drivers

- At the department level, Hispanic drivers were the least likely to be issued warnings (49.0% of stops) when compared to Other (66.9%), White (64.6%), and Black (60.8%) drivers.
- Hispanics received the highest percentage of citations (40.4%), while Whites were the least likely to receive citations (29.0%) compared to Blacks (30.2%) and Other drivers (31.5%).
- Racial/ethnic differences in arrests and searches were also evident.
 - Hispanic drivers were more than two times more likely than White drivers to be arrested and searched.
 - Black drivers were also more likely to be arrested and searched in comparison to White drivers, although the differences were not as great as those for Hispanic drivers.

- Drivers of other races were the least likely to be arrested (0.6%) or searched (2.2%).
- These racial/ethnic patterns varied slightly at the shift level.
- At the department level, no significant differences existed between male and female drivers' likelihood of receiving warnings and citations.
- Male drivers were, however, significantly more likely to be arrested (4.9% of stops) and searched (9.4%) compared to female drivers (1.8% arrested, and 2.7% searched).
- These gender patterns were fairly consistent at the shift level.
- FPD supervisors should review findings at the shift level for the best understanding of trends of racial/ethnic disparities in stop outcomes within their jurisdictions.

Bivariate Analyses – Differences in Reasons for the Stop across Stop Outcomes and Types of Drivers

In an effort to better understand factors that influence whether or not drivers receive particular outcomes, additional analyses regarding the reasons for the stops were performed. First, the relationship between reason for the stop and stop outcomes was explored. Following that, the relationship between reason for the stop and drivers' race/ethnicity and gender was examined.

- The reason for the stop is clearly related to the likelihood of particular outcomes.
 - Stops made for equipment violations were significantly more likely than all other reasons for the stop to result in warnings, while stops for investigatory reasons and LEADS inquiries were least likely to result in warnings.
 - Stops based on speeding violations, license/registration violations, and LEADS inquiries were all significantly more likely than other reasons for the stop to result in citations.
 - Stops made for investigative reasons, LEADS inquiries, and other reasons were significantly more likely than all other reasons for the stop to result in arrests, while stops for speeding violations and equipment violations rarely resulted in arrests.
 - Stops based on investigative reasons, LEADS inquiries, other reasons, and license/registration violations were all significantly more likely than speeding, moving, and equipment violations to result in searches.
- If particular racial/ethnic groups are more likely to be stopped for particular reasons, then it is possible that disparities in outcomes evident above might be accounted for by legal variables.

- Statistically significant differences in the reasons for the stop are evident by race/ethnicity:
 - Drivers of Other races (Native Americans, Asians, Middle Easterners, and other minorities) were significantly more likely to be stopped for speeding compared to Whites, Blacks, and Hispanics, while Hispanics were the least likely to be stopped for speeding.
 - Hispanics and Other drivers were significantly more likely to be stopped for moving violations compared to Whites and Blacks.
 - Hispanics were significantly more likely to have officers indicate license/registration violations as a reason for the stop compared to all other racial/ethnic groups.
 - This finding suggests that minority drivers may be more likely to be stopped based on violations that are indirectly linked to income
 - Blacks and Hispanics were the most likely to be stopped for investigatory reasons and LEADS inquiries, while drivers of Other races were the least likely.

Multivariate Analyses of Traffic Stop Outcomes

- Multivariate statistical models take many different factors into account simultaneously when attempting to explain a particular behavior, and therefore provide a more thorough and accurate interpretation of the data.
- Warnings
 - Hispanic drivers were 1.7 times significantly *less* likely than Whites to receive warnings
 - The majority of the other driver characteristics (including driver Black) are not statistically significant predictors of the probability of receiving a warning.
 - The strongest predictors of whether or not drivers receive warnings were the reasons for the stop.
 - For example, those stopped for an equipment violation were 10.4 times more likely to receive a warning than those stopped for speeding.
 - Drivers stopped who had additional violations discovered subsequent to the stop were 4.4 times significantly less likely to be issued a warning than those with no subsequent violations.
- Citations
 - Like the model for warnings, the likelihood of receiving a citation is primarily influenced by the reasons for the stop.
 - Drivers stopped for equipment violations were 13.2 times less likely to receive a citation compared to drivers stopped for speeding violations.

available data are important variables for explaining whether or not drivers are searched.

- Stop outcomes may also be explained by factors unmeasured by these data (e.g., the severity of the traffic offense, drivers' compliance with officers' requests, drivers' socioeconomic status, etc.).
 - The reasons for the small racial/ethnic disparities in stop outcomes reported cannot be determined with these data.

5. SEARCH AND SEIZURE

OVERVIEW

The material presented in this section is focused specifically on searches conducted during traffic stops. As reported in Section 3, 6.9% of all member-initiated traffic stops during 2007 - 2008 resulted in a search. The purpose of the analyses presented in this section is to further examine searches and seizures conducted by FPD officers. Section 5 begins with a description of searches and seizures at the department and shift level. This information is documented in Tables 5.1 – 5.2, as well as Figures 5.1 – 5.4. The next section describes search rates for three types of searches: Type I—searches that are required by FPD policy, Type II—discretionary searches guided by legal statutes, and Type III—searches based solely on drivers’ consent to an officer’s request to search. Figure 5.5 reports, at the department level, the search rates for these three types of searches, as well as the racial/ethnic differences in these three types of searches.

Search success rates are also explored in detail. Figure 5.6 reports the search success rates by the reason for search at the department level. Search success rates for Type II searches are examined in Figure 5.7. Figure 5.8 provides, at the department level, the overall Type II search success rates, as well as the racial/ethnic differences in Type II searches. Thereafter, an examination of consent searches (Type III) is provided. Racial and ethnic differences in request for consent to search and refusal to consent are also reported. Section 5 concludes with a summary of the main findings.

DESCRIPTION OF SEARCHES AND SEIZURES

Searches

This section provides a descriptive overview of the searches conducted by FPD officers during traffic stops in 2007 - 2008. As again graphically displayed in Figure 5.1 below, Hispanic drivers were significantly more likely than all other races/ethnicities to be searched during traffic stops initiated by Fairfield Police Officers. Specifically, 14.5% of stopped Hispanic drivers were searched. It is important to understand the underlying reasons for this ethnic disparity.

Figure 5.1: Racial/Ethnic Disparities in Searches

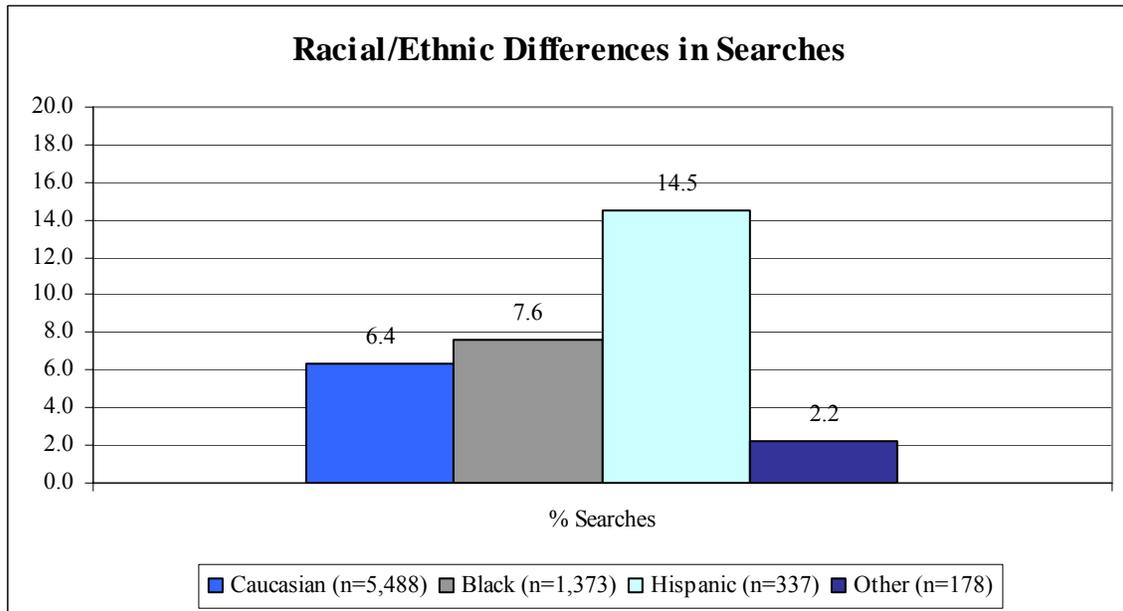
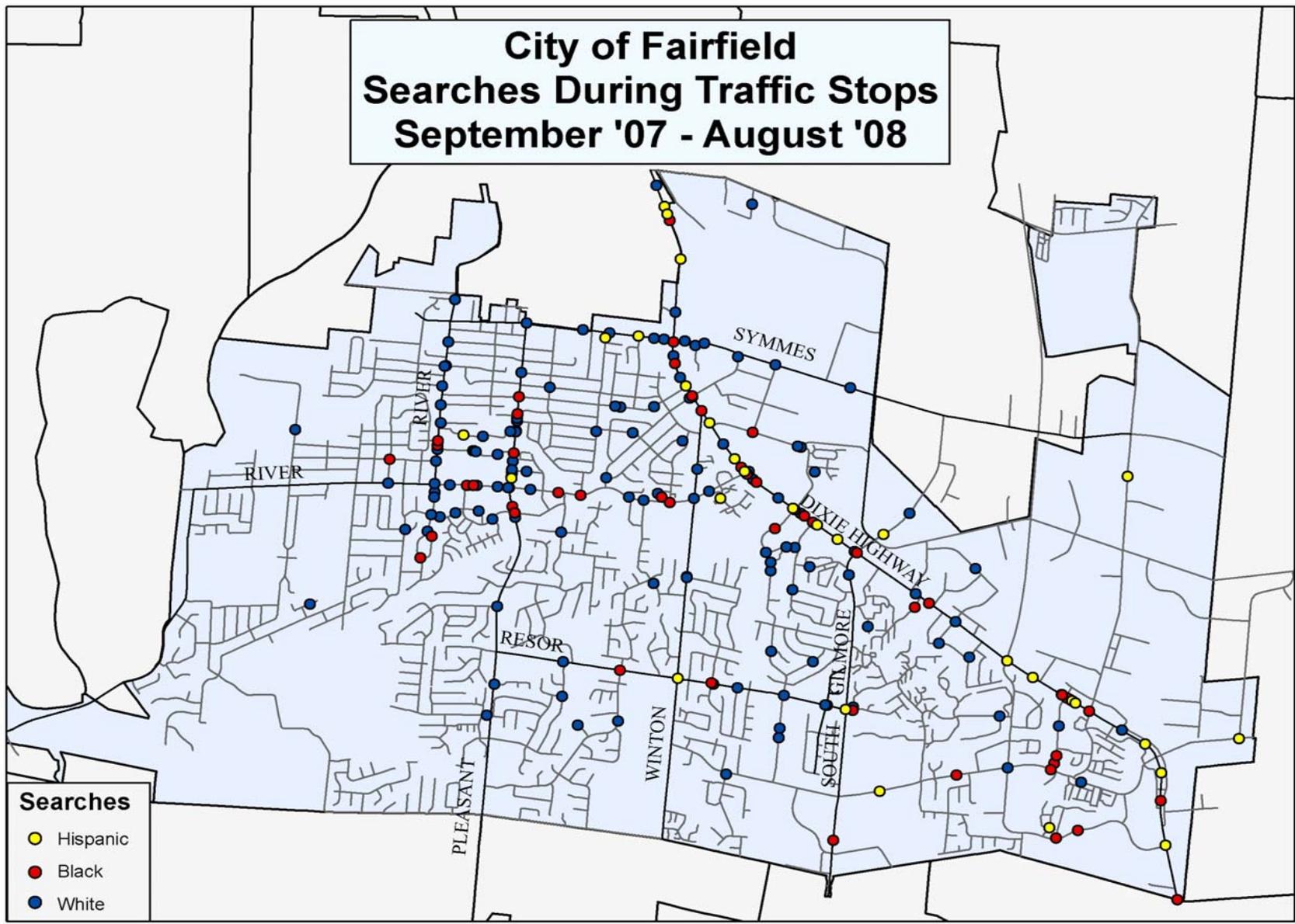


Figure 5.2 geographically displays the location of where searches were conducted during traffic stops of White, Black, and Hispanic motorists. This map demonstrates that the majority of searches were conducted along two or three major thoroughfares (e.g., Dixie Highway, River Road, and Symmes Road). The map also demonstrates that searches of Hispanics and Black drivers are not geographically clustered in particular neighborhoods, but rather occur in the same general locations as searches of White motorists.

Figure 5.2: City of Fairfield Traffic Searches by Racial/Ethnic Group



Reasons for the Search

Table 5.1 below reports the total number of traffic stops, the percentage of stops that result in a search, and the total number of searches at the department and shift level. This table also documents the percentage of searches for each reason indicated on the data collection forms: consent, probable cause, canine alert, incident to arrest, and other (e.g., vehicle inventory).⁸ As shown in Table 5.1, FPD officers conducted a total of 507 searches of drivers, vehicles, and/or passengers during officer-initiated traffic stops in 2007 - 2008 (6.9% of the 7,378 traffic stops). Variation in these percentages is evident at the shift level, as officers assigned to Shifts 2 and 3 conducted the overwhelming majority of searches of stopped drivers. At the shift level, officers assigned to Shift 1 conducted the smallest percentage of searches (0.5%).

Table 5.1: Reasons for 2007 – 2008 Traffic Stop Searches – Department and Shifts

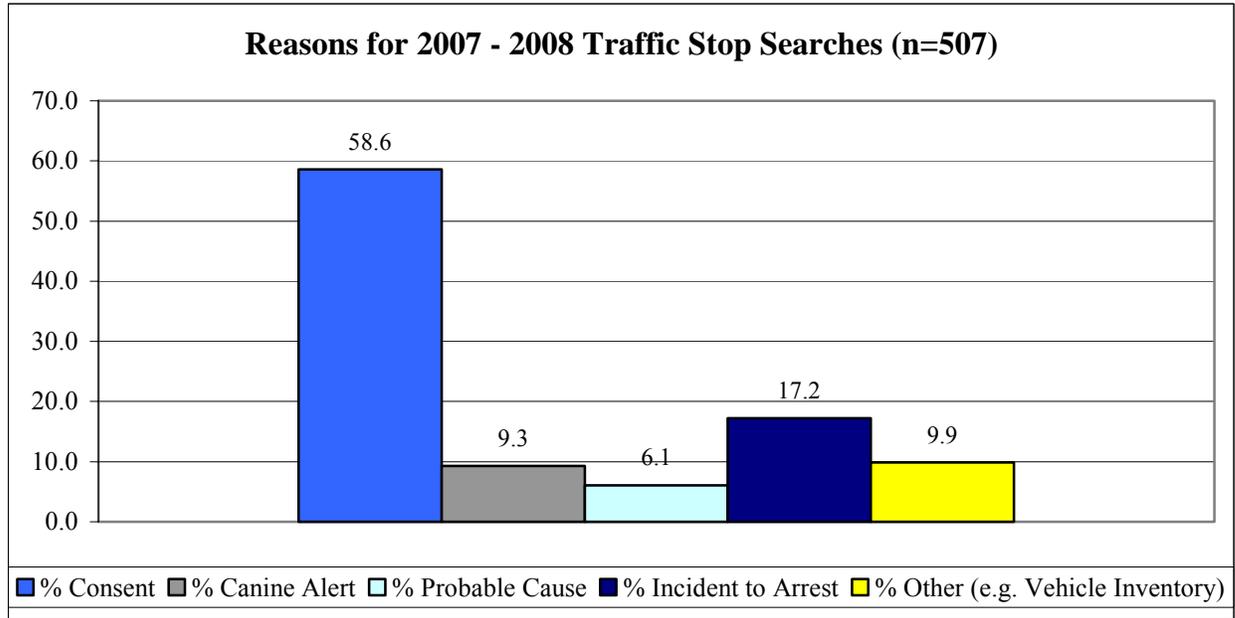
	Total # of Stops	% Stops resulting in Searches	Total # of Searches	% Consent	% Canine Alert	% Probable Cause	% Incident to Arrest	% Other (e.g. Vehicle Inventory)
Fairfield Police Department	7,378	6.9	507	58.6	9.3	6.1	17.2	9.9
Shift 1 (6:00 am – 2:30 pm)	1,658	0.5	9*	0.0	0.0	11.1	66.7	22.2
Shift 2 (2:00 pm – 10:30 pm)	3,414	10.6	363	72.7	4.1	8.0	9.9	6.3
Shift 3 (10:00 pm – 6:30 am)	2,157	6.0	130	24.6	8.5	11.5	36.9	19.2
Shift 4 (8:00 am – 4:00 pm)	148	3.4	5*	20.0	0.0	0.0	80.0	0.0

* Due to the small number of searches for this shift, interpret percentages with caution.

As shown in Table 5.1 and graphically displayed in Figure 5.3 below, the most frequent reason for searches across the department was consent (58.6%), followed distantly by incident to arrest (17.2%), other (9.9%), canine alert (9.3%) and probable cause (6.1%). Table 5.1 also illustrates the variation in the different reasons for searches across shifts. For example, consent was the most common reason for searches by officers assigned to Shift 2 (72.7%), while incident to arrest was the most common reason for search for all other shifts (Shift 1 = 66.7%, Shift 3 = 36.9%, Shift 4 = 80.0%). Table 5.1 provides a description of further variation at the shift level.

⁸ Although the data collection form allowed for the collection of all reasons for the search, when the data was entered into the database, only one reason was captured for the first 10 months of the year-long data collection period. While the data entry clerk indicated that multiple entries were rare, additional reasons for the search were not systematically captured.

Figure 5.3: Reasons for 2007 – 2008 Traffic Stop Searches (n=507)



Seizures

Table 5.2 reports the total number of seizures at the department and shift level, and documents the types of evidence and/or contraband confiscated during searches conducted by FPD officers.⁹ In 2007 – 2008, there were 163 seizures of contraband resulting from the 507 conducted searches during 7,378 officer-initiated traffic stops.

Table 5.2: 2007 - 2008 Traffic Stop Seizures – Department and Shifts

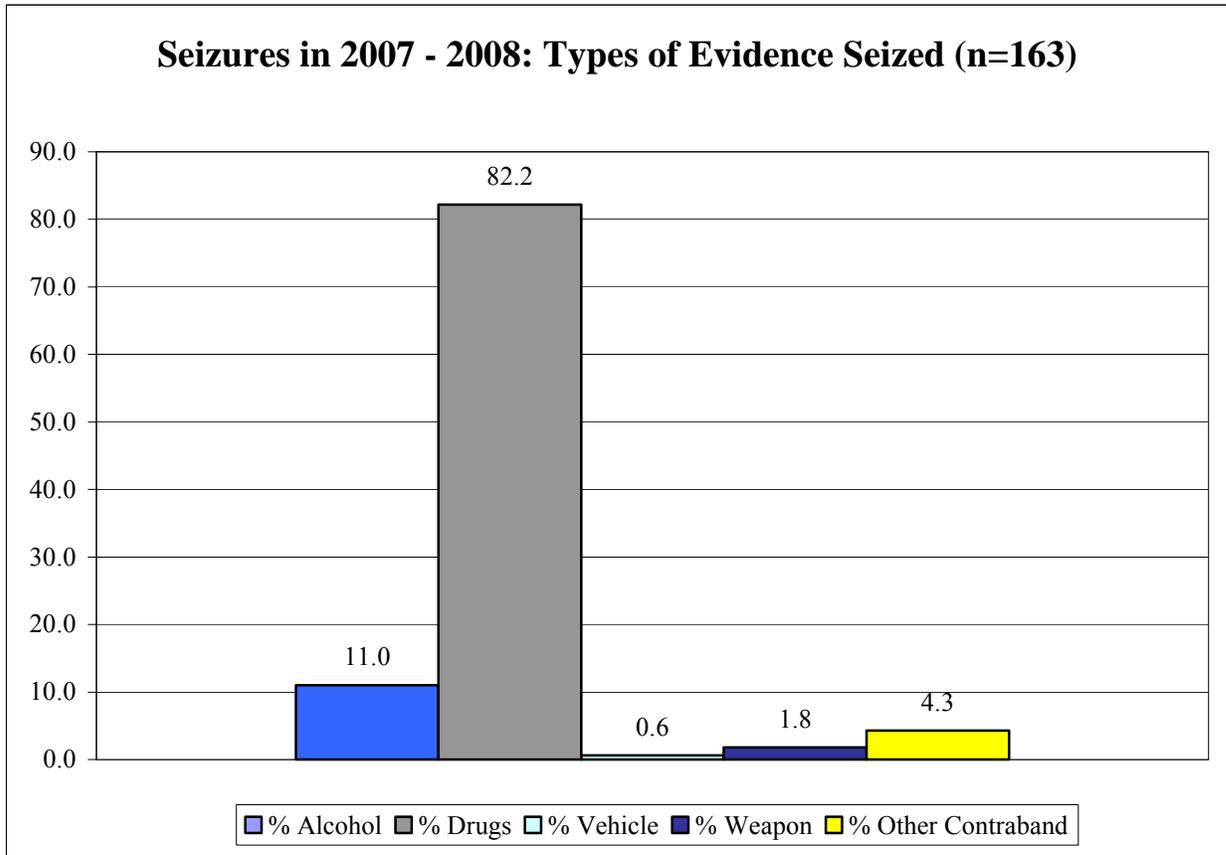
	Total # of Seizures	% Alcohol	% Drugs	% Stolen Property	% Vehicle	% Weapon	% Currency	% Other Contraband
Fairfield Police Department	163	11.0	82.2	0.0	0.6	1.8	0.0	4.3
Shift 1 (6:00 am – 2:30 pm)	1*	0.0	100.0	0.0	0.0	0.0	0.0	0.0
Shift 2 (2:00 pm – 10:30 pm)	133	10.5	85.0	0.0	0.0	0.8	0.0	3.8
Shift 3 (10:00 pm – 6:30 am)	28	14.3	71.4	0.0	3.6	3.6	0.0	7.1
Shift 4 (8:00 am – 4:00 pm)	1*	0.0	0.0	0.0	0.0	100.0	0.0	0.0

*Due to the small number of seizures for this shift, interpret percentages with caution.

⁹ Again, although the data collection form allowed for the collection of all types of contraband seized, when the data was entered into the database, only one type of contraband was captured for the first 10 months of the year-long data collection period. While the data entry clerk indicated that multiple entries were rare, if more than one type of contraband was seized it was not systematically captured. Therefore, while the overall percentage of searches resulting in seizures is accurate, the percentages of individual categories of types of contraband are possibly underestimated.

As reported in Table 5.2 and graphically displayed in Figure 5.4, across the department, the overwhelming majority of contraband seizures resulted from drug seizures (82.2%), followed distantly by alcohol (11.0%), other contraband (4.3%), and weapons (1.8%). Table 5.2 also documents the differences in the types of evidence seized across shifts. The trends displayed at the department level are fairly consistent across Shifts 2 and 3. Shift 1 and 4 only reported one contraband seizure each.

Figure 5.4. Seizures in 2007 - 2008: Types of Evidence Seized (n=163)



NOTE: No searches resulted in the seizure of stolen property or currency; these categories are excluded.

TYPES OF SEARCHES

While examining the specific reasons for a search is instructive, this information is more easily understood when collapsed into discrete categories, or types of searches. These types of searches, although based on different reasons, have similar characteristics that warrant them being considered collectively. For the analyses reported in Figure 5.5 below, searches were divided into three categories based on the presumed level of officer discretion. The first search category—Type I—includes searches that are required by FPD policy and therefore, mandatory for officers to perform. Type I (Mandatory) searches include searches

incident to arrest and those based on other reasons.¹⁰ The second search category—Type II—includes searches that are not mandatory, but rather are discretionary, yet guided by legal statutes. Specifically, Type II (Discretionary) searches include those based on probable cause or canine alert. The third search category—Type III—includes searches based solely on drivers’ consent to an officer’s request to search. If multiple reasons for the search were indicated, they were classified based on the lowest level of discretion.

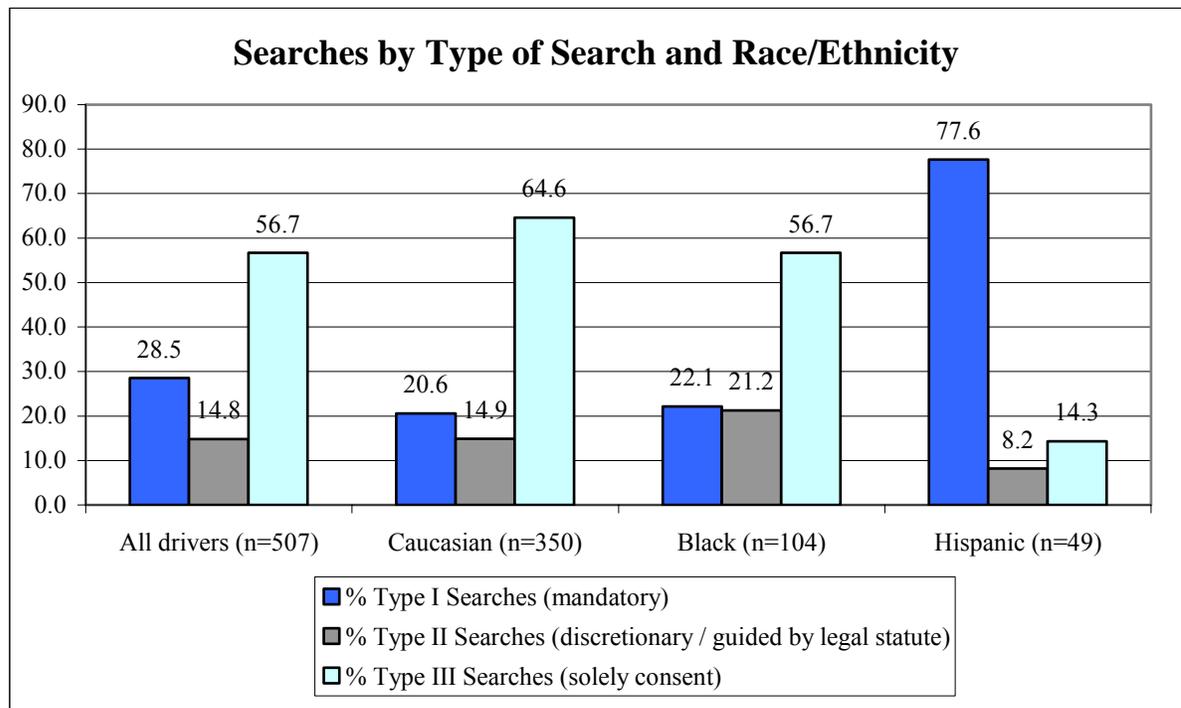
Figure 5.5 below displays the number of total searches and the search rates for each of the three types of searches at the department level.¹¹ As shown in Figure 5.5, the majority (56.7%) of searches conducted were Type III (solely consent), while 28.5% and 14.8% were Type I (mandatory) and Type II (guided by legal statute) searches, respectively.

While examining search rates across the types of searches is important, it is also instructive to consider differences in the types of search rates based on drivers’ characteristics. Therefore, also shown in Figure 5.5 are the racial/ethnic differences in the three types of search rates at the department level. Figure 5.5 indicates that Hispanics (77.6%) were the most likely racial/ethnic group to be searched for mandatory reasons (Type I), while the most common type of search for Whites and Blacks was Type III (solely consent). Specifically, 64.6% of searches of Whites and 56.7% of searches of Blacks were conducted based solely on consent. Conversely, only 14.3% of searches of Hispanics were Type III. Type II searches were the least common type of search across all racial groups. In summary, the patterns for the search authority for Hispanic searches differ significantly from the pattern for White and Black drivers. Hispanics are significantly more likely to be searched for mandatory reasons compared to other racial/ethnic groups. In contrast, the search authorities for searches of White and Black motorists are not statistically significantly different from one another.

¹⁰ Searches where the search authority indicated was “other” are classified as Type I Mandatory because a review of these stops discovered that in each of these cases the reason for the search was vehicle inventory.

¹¹ No further search and seizure analyses are conducted at the shift level due to the small number of searches conducted by Shifts 1 and 4.

Figure 5.5: Searches by Type of Search and Race/Ethnicity



NOTE: Differences across the racial/ethnic groups presented in this figure are statistically significant at $p \leq .001$

SEARCH SUCCESS RATES

Although multivariate analyses (like those performed in Section 4) are the most common form of testing for disparities in stop outcomes, more recently, the discussion regarding bias-based policing has also focused on examining outcomes in the form of search “hit” rates. If drivers were searched strictly based on legal factors and suspicions unrelated to race, one would expect similar percentages of searches resulting in seizures across racial groups. This has been described as the “outcome test” (Knowles, Persico & Todd, 2001; Ayres, 2001). Originally applied by Becker (1957) to examine economic disparate treatment of minorities, the basic notion of the outcome test is to analyze whether outcomes are systematically different across groups. Ayres (2001) has argued that the “outcome test” can be used to successfully examine racial disparities in police practices, including searches. When applied to police searches, the outcome test is essentially a comparison of the successfulness of those searches – or a statistical comparison of the percentage of searches that result in seizures across racial/ethnic groups. This is also referred to as a statistical comparison of “search success rates” or “hit rates.”

Racial/ethnic comparisons of hit rates are calculated by dividing the percent of searches in which officers seize some type of contraband (e.g., drugs, illegal weapons, etc.) by the number of total searches (Fridell, 2004, 2005; Ramirez et al., 2000).

Some scholars and police officials have argued that searches of minorities are more likely to produce contraband compared to searches of Whites (Knowles et. al., 2001). Others have argued that minority citizens are not more likely to be carrying contraband, and that

a comparison of search success rates shows that racial profiling policies are ineffective (Cole, 1999; Harris, 2002). The application of the outcome test to police searches is based on the notion that if officers are profiling minority motorists based on racial prejudice, they will continue to search minorities even when the returns (i.e., the discovery of contraband) are smaller for minorities than the returns for searching Whites (Anwar & Fang, 2006). Conversely, if no bias exists, over a period of time a state of equilibrium will be achieved in which the police will search racial groups proportionate to their actual possession of contraband. The need to include multiple variables (i.e., multivariate model) is removed by reliance on the principle of equilibrium.

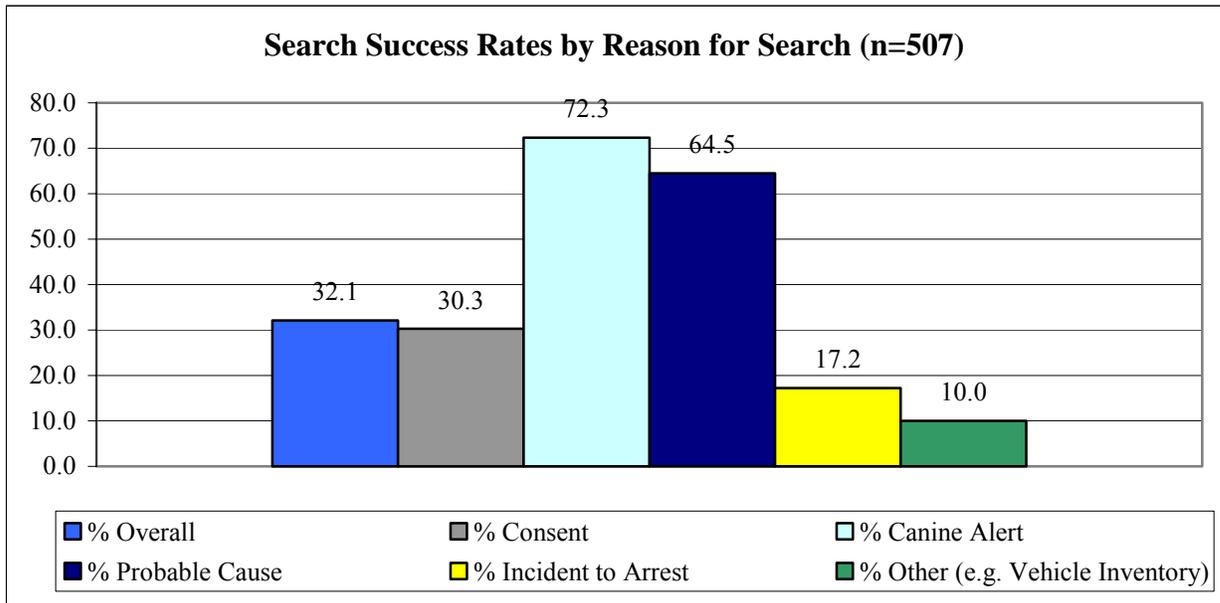
As with other analytical techniques, limitations exist which limit the conclusions that can be drawn from the outcome test (Engel, 2008; Engel & Tillyer, 2008). The outcome test is only appropriate for an analysis of traffic stops that result in a discretionary search; therefore, mandatory and consent searches should not be considered. In addition, any racial/ethnic disparities in hit rates discovered using this method do not necessarily imply officer bias. Notwithstanding the limitations of the outcome test, it does provide an alternative method to assess post-stop outcomes. Nevertheless, it is recommended that no definitive conclusions about racial bias be drawn from these comparisons based on the limitations of this technique (for details, see Engel, 2008; Engel & Tillyer, 2008).

Search Success Rates by Reasons for Search

As noted above, based on FPD policies, officers have little or no discretion over some types of searches (e.g., vehicle inventories, searches incident to arrest). Furthermore, it is likely that different reasons for searches might lead to varying rates of contraband seizures. Figure 5.6 explores this possibility, illustrating, at the department level, the overall search success rate and the success rates for each specific reason for search.

As shown in Figure 5.6, department-wide, the overall search success rate is 32.1% -- that is, 32.1% of all searches conducted during traffic stops resulted in the seizure of contraband. This rate, however, varies dramatically across reasons for search. Across the department, the two most successful types of searches were those based on canine alerts (72.3%) and probable cause (64.5%). Searches based on mandatory reasons (incident to arrest, 17.2%, and other/vehicle inventory, 10.0%) were the least successful in terms of recovering contraband. Likewise, searches based solely on consent were successful in discovering contraband in 30.3% of those searches.

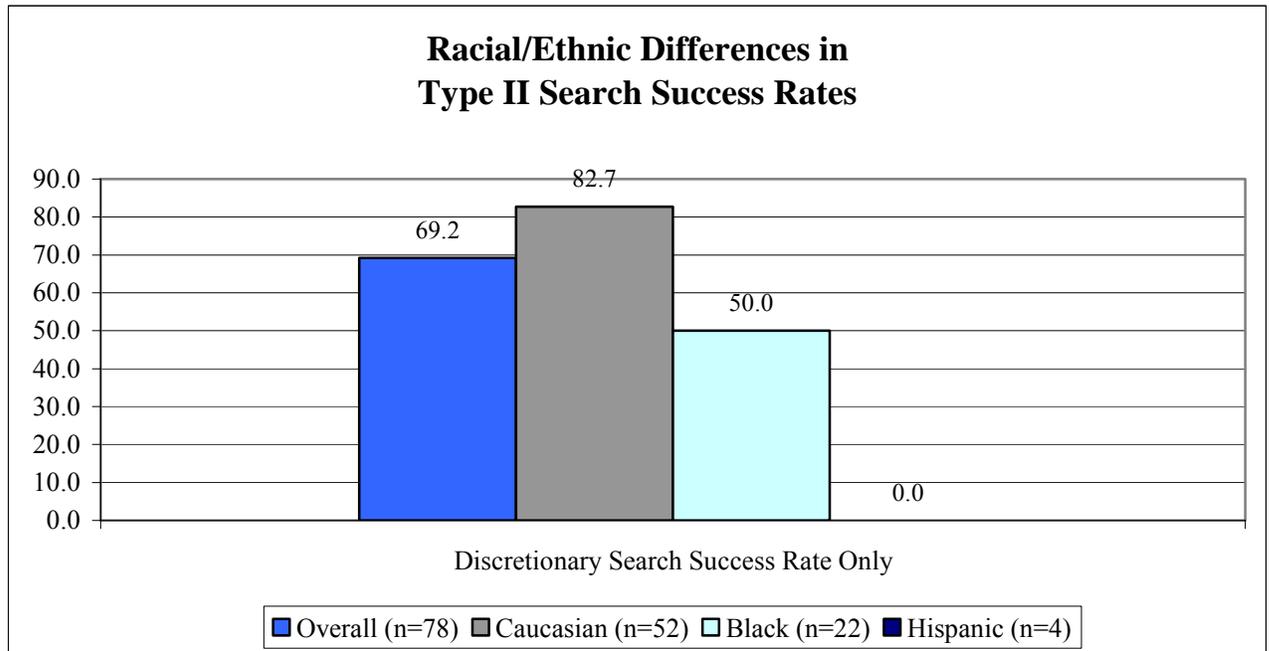
Figure 5.6: Search Success Rates by Reason for Search (n=507)



Type II Search Success Rates by Race/Ethnicity & Gender

As noted previously, utilizing the outcome test to examine racial/ethnic disparities in search success rates requires that the analyses be limited to only non-consent discretionary searches. Therefore, information regarding the Type II search success rates is further summarized below. Figure 5.7 displays, at the department level, the overall Type II search success rate and the search success rates for each race/ethnic category. Department-wide, 69.2% of Type II searches were successful in recovering contraband. Figure 5.7 also demonstrates racial/ethnic differences in discretionary search success rates. Discretionary searches of White motorists resulted in discoveries of contraband 69.2% of the time, compared to only 50% of the searches of Black motorists, and none of the discretionary searches of Hispanics. Note, however that these racial/ethnic disparities are based on very few discretionary searches of Black and Hispanic motorists. These racial/ethnic disparities in discoveries of contraband during discretionary searches need to be continually tracked by the Fairfield Police Department. As more data is collected, the stability of these disparities will be more evident. ***It is the conclusion of this report that although the trends in discretionary search success rates show racial/ethnic disparities, more data needs to be gathered before any conclusions regarding these trends can be made.***

Figure 5.7: Racial/Ethnic Differences in Type II Search Success Rates



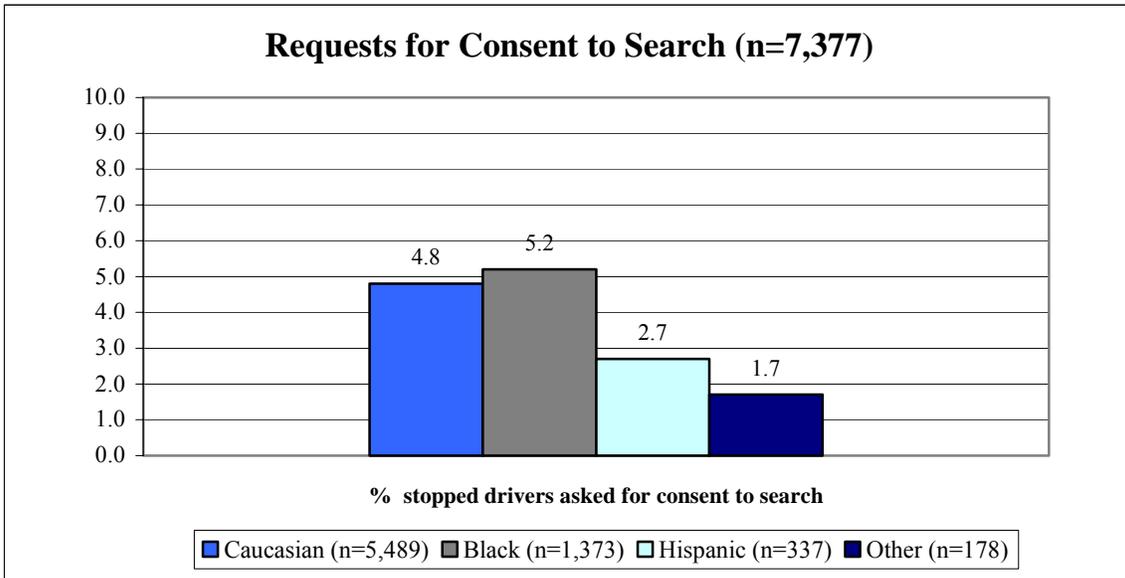
NOTE: Differences across the racial/ethnic groups presented in this figure are statistically significant at $p \leq .01$

Examining Consent Searches

As demonstrated earlier, consent searches are successful in terms of producing seizures of contraband in 30.3% of searches. Examining whether these success rates vary by race/ethnicity, however, is complex. As noted above, it is ill-advised to utilize the outcome test to assess racial/ethnic bias in consent searches, because ultimately it is the citizen, not the officer who has final discretion over whether or not these types of searches are conducted. That is, citizens always have the right to refuse. As such, the underlying assumptions of the outcome test that officers have full discretion over whether or not to conduct searches is violated. Despite these limitations, an examination of racial/ethnic differences in Type III search success rates is presented for internal, departmental comparison purposes only. Therefore, following an examination of racial/ethnic differences in requests for consent and refusals to consent, racial/ethnic differences in search success rates for Type III searches are provided with the above noted caveats.

Of the 7,378 traffic stops, 348 (4.7%) drivers were asked for consent to search.¹² As demonstrated in Figure 5.8 below, an examination of the drivers' race/ethnicity for the 7,377 stops with valid race information indicates that certain ethnic/racial groups were significantly more likely than others to be asked for consent to search. Specifically, Black drivers were the most likely (5.2%) to be asked for consent to search, while 4.8%, 2.7%, and 1.7% of White, Hispanic, and Other drivers were asked for consent to search, respectively. Comparisons directly between White and Black drivers, however, demonstrate that these differences are not statistically significantly different.

Figure 5.8: Requests for Consent to Search (n=7,377)



NOTE: Differences across the racial/ethnic groups presented in this figure are statistically significant at $p \leq .05$

Of the 348 drivers who were asked for consent to search, 27 (7.8%) refused to give consent. The percentage of refusals to give consent when asked was statistically equivalent across White and Black drivers. Specifically, 8.3% of Black drivers and 8.0% of White drivers refused to give consent when asked. The number of Hispanic and Other drivers who were asked for consent to search is too small for stable comparisons across racial/ethnic groups (Hispanics, n=9, Other drivers, n=3). Of this small number of requests for consent from these drivers, however, none refused to give consent to search when asked.

¹² In an effort to utilize as much information as possible for statistical analyses, an additional assumption regarding search data has been made. In the data set, there were 339 stops where officers indicated that they had requested consent to search from the drivers, 311 of whom granted consent. An additional 9 stops, however, indicated that consent had been granted even though the traffic stop data indicated the officer had not requested to search. Focus group interviews with FPD officers confirmed that in some cases, drivers sometime just consent to a search without specifically being asked for it by the officer. Due to the inherent power differential during a traffic stop, however, these 9 cases are treated, for analytical purposes, as cases where consent to search was requested.

A comparison of hit rates across racial/ethnic groups for consent only searches was also conducted. Again, there were too few consent only searches for consideration of Hispanic and “Other” racial/ethnic groups. Examining only White and Black search success rates for consent searches, no statistically significant differences were found. Specifically, 31.9% of consent searches of White motorists resulted in discoveries of contraband, compared to 27.1% of consent searches of Black motorists. These differences are not statistically significant.

SECTION SUMMARY

- ***Description of Searches and Seizures***
 - Department-wide from September 1, 2007 to August 31, 2008, FPD officers conducted 507 searches during officer-initiated traffic stops.
 - Consent was the most frequent reason for searches across the department (58.6%), followed distantly by incident to arrest (17.2%), other (9.9%), canine alert (9.3%), and probable cause (6.1%).
 - Department-wide, FPD officers successfully seized contraband during 163 searches – an overall search success rate of 32.1%.
 - The most frequent type of contraband seized was drugs (82.2%).
 - Other less common types of contraband seized were: alcohol (11.0%), other contraband (4.3%), and weapons (1.8%).
- ***Types of Searches***
 - At the department level, the majority of searches conducted were Type III (solely consent) searches (56.7%), while 28.5% and 14.8% were Type I (mandatory) and Type II (guided by legal statute), respectively.
 - Analyses based on the type of search indicate statistically significant racial and ethnic disparities in searches across all three search type categories:
 - Hispanics were most likely to be searched for mandatory reasons (Type I).
 - The most common type of search for Whites (64.6%) and Blacks (56.7%) was Type III (solely consent). Conversely, only 14.3% of searches of Hispanics were Type III.
 - Across all racial/ethnic groups, Type II searches were the least common type of search.
- ***Search Success Rates***
 - Search success rates across the department varied by the reason for search:

- The two most successful types of searches were those based on canine alerts (72.3%) and probable cause (64.5%).
 - Searches for mandatory reasons (incident to arrest, 17.2%, and vehicle inventory, 10.0%) were least successful in terms of recovering contraband.
 - Searches based solely on consent were successful in discovering contraband in 30.3% of those searches.
- The overall Type II (discretionary) search success rate for FPD was 69.2%, but success rates varied by race/ethnicity:
 - Whites had the highest discretionary search success rate at 82.7%, followed by Blacks (50.0%). These differences were statistically significant.
 - Only 78 discretionary searches were conducted department-wide.
 - Although the trends in discretionary search success rates show racial/ethnic disparities, more data needs to be gathered before any conclusions can be drawn.
 - FPD administrators should continue to monitor possible racial/ethnic disparities in discretionary search success rates.
- Analyses of consent searches revealed few racial/ethnic differences in those asked for consent to search and request refusals:
 - Hispanic and “Other” motorists were significantly less likely than White motorists to be asked for consent to search.
 - Black and White drivers were statistically equally likely to be asked for consent to search.
 - The number of requests for consent to search of Hispanics and Other drivers was too small for stable comparisons regarding their refusals.
 - White and Black motorists asked for consent to search were equally likely to refuse to give consent (8.0% and 8.3% of requests were refused, respectively).
 - White and Black motorists searched based on consent were statistically equally likely to be in possession of contraband (31.6% and 27.9% of consent searches, respectively).
 - Again, the number of consent searches for Hispanics and Other drivers was too small for stable comparisons across racial/ethnic groups. Only one, however, resulted in the seizure of contraband.
- The information presented in this section cannot determine the legality of and/or the presence of discrimination in individual searches conducted by FPD officers.
 - Caution must be used when interpreting the findings in this section because they are bivariate in nature (i.e., they do not take into account other extralegal and legal factors that might have a significant influence over search decisions).

6. TRAINING

OVERVIEW

Conversations during the focus group sessions with officers indicated the need for additional training for the Fairfield Police Department. In order to provide the best possible training to suit the specific needs of the FPD, an initial review of the current policies, procedures, and training curricula of the FPD as they related to bias-based policing practices was conducted. This review demonstrated deficiencies and/or the need for refreshers in a number of areas related to bias-free policing strategies and traffic stops more generally. In addition, officers were asked during the focus groups about the availability and perceived quality of the training they had previously received in this area. As noted in the focus group section of this report, officers indicated that they believed additional training regarding traffic stops was necessary. In the focus group sessions, participants were asked to discuss the specific topics that they believed should be covered during this training, and in what areas they believed officers within their department were the most deficient and/or in need of refreshers.

DEVELOPMENT AND CONTENT OF NEW TRAINING

Based on officers' responses and the review of the material noted above, it was recommended to Chief Dickey that additional trainers from the Cincinnati Police Department be hired to supplement my training curricula on bias-based policing. It was specifically recommended that training be provided by S. Gregory Baker, Manager of Community Relations, Sergeant Anthony Carter, and Mr. Barry Webb, all from the Cincinnati Police Department (CPD). These individuals were responsible for training the entire CPD regarding bias-based policing as part of a court settlement with the Department of Justice. Their training materials had been approved through the court monitoring process and represent best practices in this area. Chief Dickey and other members of the FPD Command Staff met with the CPD team and discussed the content of the training to ensure both parties understood the expectations and training needs. Based on this conversation, the CPD team (guided by Dr. Engel), specifically tailored the training curricula that was given to FPD officers. The curricula of this CPD-based team was supplemented with information provided by Dr. Engel regarding the trends in traffic stops conducted by the Fairfield Police Department compared to the general trends in traffic stops from agencies across the country. A detailed description of each segment of the training is provided below.

Administration of Training

This training was conducted in four-hour blocks to all members of the Fairfield Police Department over the course of four days: June 2, 4, 6, and 9, 2008. The material covered during these training sessions was divided into four distinct content areas: 1) national and local trends in bias based policing legislation and research, 2) improving customer service, 3) positive police-citizen relations, and 4) a legal refresher on traffic stops.

The first content area was delivered by Dr. Robin Engel. During this portion of the training, trends in traffic stops and traffic stop outcomes across the country were given. In addition, it was described to officers the types of information that could be gleaned from traffic stop studies, why collecting data is an important best practice in the field, and what the gathering of information could determine about police practices. Officers were also given preliminary findings from their own traffic stop study, including a review of traffic stop outcomes for different racial/ethnic groups. During this portion of the training, national trends (particularly for Hispanic drivers) were compared to early findings in Fairfield. The officers were encourage to engage in discussions regarding the likely reasons for the different experiences that Hispanic motorists appeared to be having during traffic stops with FPD officers. In particular, the differences in the reasons for searches were discussed (mandatory, discretionary, consent), and what impact that appeared to be having statistically. The need for more cultural awareness and sensitivity regarding different behavioral cues across racial/ethnic groups was also discussed, and how these may or many not be good indicators of criminal behavior.

The second content area, improving customer service, was delivered by Mr. Barry Webb. This portion of the training focused on understanding the dynamics of courtesy and power. Officers were trained about the “courtesy paradox,” where officers mistake courtesy as a sign of weakness when in fact it makes authority effective by strengthening their power. The training described how discourtesy can legitimize disrespect for police authority, and generally when officers exert the greatest degree of power & authority they display the least amount of courtesy. Officers were taught that courtesy softens power and creates an atmosphere that makes it acceptable. Officers are more likely to gain respect from public, it signifies self-control and transcends cultural differences, class distinctions, and educational variance. Officers were taught the top ten “courtesy habits” to bring to police-citizen encounters.

The third training content area, officer-citizen relations, was delivered by Mr. S. Gregory Baker and Lieutenant Anthony Carter. During this portion of the training, the purposes of a traffic stop were reviewed, and officer safety tactics were discussed. In addition, the instructors described how police-community relations could be advanced through positive traffic stop encounters. Methods for improving law enforcement in multi-cultural communities and with minority citizens were covered in detail. Officers were taught that it is not the stop, but their conduct that matters the most to minority citizens. Tactics for positive verbal approaches during traffic stops were reviewed, followed by best practices in interdiction techniques (if necessary), and the most positive ways to conclude traffic stops. Finally, effective traffic stops and preventing bias-based profiling were reviewed.

The fourth and final content area was delivered by Lieutenant Carter. During this portion of the training, the legal requirements for traffic stops were reviewed, including the legal standards for reasonable suspicion and probable cause. Current case law was also described and reviewed. A refresher was given regarding the legal and policy

requirements for different types of searches. Most importantly, Lt. Carter described the situations in which pretextual stops can become unconstitutional stops.

Officer Evaluation of the Training

Participants in three of the four sessions were asked to complete a course evaluation survey regarding the quality of the training (see Appendix D). Specifically, officers were asked to rate the presenters on a five point scale (1=poor, 2=fair 3=good, 4=very good, 5=excellent) on the following items:

Course Content:

1. Met stated course objectives
2. Degree of job relatedness

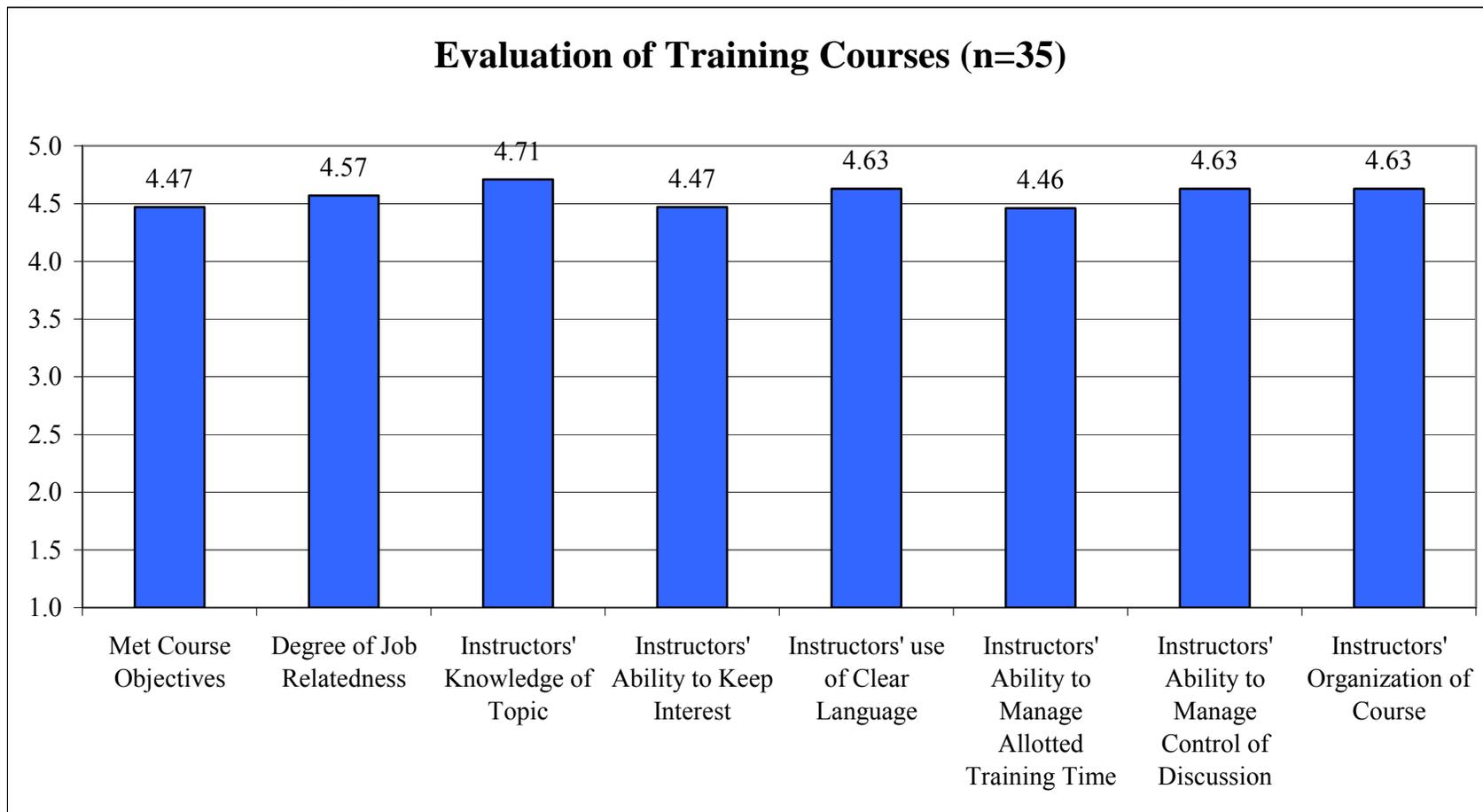
Instructors:

3. Knowledge of the topic
4. Ability to keep you interested
5. Use of clear & understandable language
6. Ability to manage allotted training time
7. Ability to manage control of discussion
8. Organization of the Course

Overall Evaluation of Training: Not Beneficial, Beneficial, or Very Beneficial

Figure 6.1 displays the mean scores recorded for 35 surveys on the eight specific criteria listed above. As displayed, the average scores ranged from very good to excellent. Of the 35 officers surveyed, only two officers ranked poor, fair, or good on any of the specific criteria. The final question – overall evaluation of training – indicated that 49% of officers surveyed thought the training was *very beneficial*, and 51% reported it was *beneficial*. No officers indicated that the training was not beneficial.

Figure 6.1: Evaluation of Training Courses (n=35)



SECTION SUMMARY

Conversations during the focus group sessions with officers indicated the need for additional training for the Fairfield Police Department. In order to provide the best possible training to suit the specific needs of the FPD, an initial review of the current policies, procedures, and training curricula of the FPD as they related to bias-based policing practices was conducted. This review demonstrated deficiencies and/or the need for refreshers in a number of areas related to bias-free policing strategies and traffic stops more generally.

Based on officers' responses and the review of the material noted above, it was recommended to Chief Dickey that additional trainers from the Cincinnati Police Department be hired to supplement my training curricula on bias-based policing. Chief Dickey and other members of the FPD Command Staff met with the CPD team and discussed the content of the training to ensure both parties understood the expectations and training needs. Based on this conversation, the CPD team (guided by Dr. Engel), specifically tailored the training curricula that was given to FPD officers.

The resulting training was delivered by four professionals with expertise in various areas related to reducing bias-based policing. The material covered during these training sessions was divided into four distinct content areas: 1) national and local trends in bias based policing legislation and research, 2) improving customer service, 3) positive police-citizen relations, and 4) a legal refresher on traffic stops.

Participants in three of the four sessions were asked to complete a course evaluation survey regarding the quality of the training. Ranking the course and instructors on eight specific criteria, the average scores ranged from very good to excellent. All participants surveyed indicated that overall the training was very beneficial or beneficial.

7. CONCLUSION AND RECOMMENDATIONS

OVERVIEW

This report documents the findings from focus group sessions and statistical analyses of data collected during all officer-initiated traffic stops conducted by the Fairfield Police Department from September 1, 2007 through August 31, 2008. This conclusion section provides a review of the major findings in this report, followed by a list of policy and training recommendations for FPD administrators. First, highlights of the findings from focus groups conducted between September and December 2007 with eight FPD officers are reviewed. Next, findings from statistical analyses of all member-initiated traffic stops reported from September 2007 to August 2008 are summarized. Following the statistical analyses is a summary of the training provided to FPD officers. Finally, several policy and training recommendations are provided based on these analyses.

FOCUS GROUPS

Focus group interviews were periodically conducted with the same group of eight FPD officers between September and December 2007. The purpose of conducting the focus groups was to understand “best practices” of traffic stops, criminal interdiction, and professionalism as was currently delivered by FPD officers and understand the deficiencies in these best practices. The research was specifically designed to better understand perceptions of suspiciousness and search decisions based on information provided by officers who were identified by their supervisors as engaging in best practices. In addition, information was sought to understand the impediments to these best practices, and the specific training needs for this agency. This research directly impacted the development of training and recommendations included in this report.

FPD officers participating in the focus groups noted a number of strengths of the department, including:

- Agency is well-equipped with high quality and soundly maintained equipment and new facilities
- Opportunities for specialty assignments and varied career paths exist (e.g., canine, vice, SWAT, honor guard, school resource officers, community relations positions, etc.).
- Strong service orientation of the department exemplified by quick response to calls for service
- Strong benefits for employees as well as flexibility for time off, higher pay scale than many other police agencies, and availability for overtime duties.

In addition, however, officers noted several areas that they considered weaknesses or areas for improvement with their agency, including:

- Communication from the administration to the field officers was sometimes strained and that the information is communicated in different manners depending upon the supervising officers on duty.
- Inconsistency in supervisory styles and conflicting messages based on this inconsistency.
- Occasional lack of accountability for officers and supervisors.

- Changes in policies and procedures of the agency that often do not translate to the working practices of officers in the department.
- Complacency of some officers--few rewards or incentives for doing exceptional work.
- When discussing training issues, focus group participants indicated that they believed that the agency needed more training on traffic stops, including training on officer safety, legal requirements, customer service, and bias-free policing tactics.

In terms of the participants' discussions on bias-based policing, the officers made the following general comments:

- Participants generally did not believe citizens to be treated differently based on their race/ethnicity.
- Suggested that the department should make an attempt at greater diversity in hired officers.
- Perceived the Fairfield community as being a source of some discrimination – describing calls received by dispatchers from citizens requesting action from officers toward Black and Hispanic citizens that might not be warranted based on actual criminal activity.
- Agreed that training to reduce the potential for bias-based policing would be beneficial for their department.

In addition to the focus group research, I also consulted with FPD field supervisors in the development and pilot test of an instrument to assist field supervisors in the periodic review of their subordinates' traffic stops recorded on videotapes. Based on this pilot test, the following recommendations regarding supervisory reviews of traffic stop videos were made to Chief Dickey:

- Develop specific policy for supervisory review of videotapes
- Require the use of the new checklist to document reviews (see Appendix B)
- Ensure all supervisors adopt the policy and directly address supervisors who do not review the tapes on a regular basis
- Develop / enforce a policy to require body microphone use during all traffic stops
- Review tapes of every officer once every three months
- Review a minimum of five stops per officer
- Ensure the stops for review are selected at random (currently only the first stop is reviewed)
- Do not allow supervisors to inform officers when their traffic stops will be reviewed

TRAFFIC STOP DATA

FPD initiated traffic stop data collection after a process of reviewing data collection templates from various agencies and ultimately tailoring a data collection form to the needs of the FPD. This form was pilot tested with a group of officers, revisions were made, and a final form was distributed for use in the field in September 2007. Officers

from every shift were trained on the use of the form by Dr. Engel during a one-hour session that included a question and answer opportunity. In addition, written procedures and instructions were created and distributed to all FPD personnel.

Between September 1, 2007 and August 31, 2008, 7,378 traffic stops were initiated by FPD officers and entered into the database for analysis. Based on the traffic stops reported, a description of these stops and the drivers stopped is summarized below:

- Stop Characteristics
 - Occurred on a weekday (68.1%)
 - Occurred during the daytime (51.0%)
 - Occurred during rush hour (33.7%)
 - Majority lasted less than 20 minutes (0-10 min. 80.4%; 11-20 min. 15.5%)
 - August accounted for the highest percentage of stops (12.2%), followed by February and April (10.6% in each) and July (10.4%).
 - Trends varied across the four shifts
- At the department level, the most frequent reasons for the stop included:
 - Prior to the Stop: Speeding Violations (35.8%), Moving Violations (25.9%), and Equipment Violations (20.5%)
 - Subsequent to the Stop: License / Registration Violations (5.0%) and Equipment Violations (1.5%)
- Driver Characteristics
 - Average age of 35.7 years
 - Male (62.8%)
 - White (74.4%), Black (18.6%), Hispanic (4.6%), Native American (0.1%), Asian (1.3%), Middle Eastern (0.9%), Other/Unknown race/ethnicity (0.1%)
 - Fairfield residents (51.5%), Ohio residents (95.1%)

Some variation in the racial and ethnic background of drivers stopped across shifts is to be expected due to differences in the demographic makeup of residents and travelers, along with differences in traffic flow patterns. Furthermore, the percentage of Fairfield residents indicates that it is inappropriate to assume residential populations are similar to driving populations – i.e., Census data are not appropriate comparisons for benchmark analyses.

POST-STOP OUTCOMES

Analysis of racial/ethnic differences in post-stop outcomes is an important component of any traffic stop data analysis study because the potential for racial bias in police decision-making is not limited to the initial stopping decision. To investigate the possibility of racial/ethnic differences in post-stop outcomes, bivariate and multivariate analyses were conducted. Initially, chi-square analyses were computed between race/ethnicity and each

of four stop outcomes: warning, citation, arrest, and search. The following are the main findings of these analyses:

- Hispanic drivers were the least likely to be issued warnings (49.0% of stops) when compared to Other (66.9%), White (64.6%), and Black (60.8%) drivers.
- Hispanics received the highest percentage of citations (40.4%), while Whites were the least likely to receive citations (29.0%) compared to Blacks (30.2%) and Other drivers (31.5%).
- Racial/ethnic differences in arrests and searches were also evident.
 - Hispanic drivers were more likely than White drivers to be arrested and searched.
 - Black drivers were also more likely to be arrested and searched in comparison to White drivers, although the differences were not as great as those for Hispanic drivers.
 - Drivers of other races were the least likely to be arrested or searched.

To better understand factors that influence whether or not drivers receive particular outcomes, additional analyses regarding the reasons for the stops were performed. The results of these chi-square analyses revealed that:

- The reason for the stop is clearly related to the likelihood of particular outcomes.
 - Stops made for equipment violations were significantly more likely than all other reasons for the stop to result in warnings, while stops for investigatory reasons and LEADS inquiries were least likely to result in warnings.
 - Stops based on speeding violations, license/registration violations, and LEADS inquiries were all significantly more likely than other reasons for the stop to result in citations.
 - Stops made for investigative reasons, LEADS inquiries, and other reasons were significantly more likely than all other reasons for the stop to result in arrests, while stops for speeding violations and equipment violations rarely resulted in arrests.
 - Stops based on investigative reasons, LEADS inquiries, other reasons, and license/registration violations were all significantly more likely than speeding, moving, and equipment violations to result in searches.

Certain racial/ethnic groups were more likely to be stopped for particular reasons; therefore, it is possible that disparities in outcomes might be accounted for by legal variables. Statistically significant differences in the reasons for the stop were found by race/ethnicity:

- Drivers of Other races (Native Americans, Asians, Middle Easterners, and other minorities) were significantly more likely to be stopped for speeding

compared to Whites, Blacks, and Hispanics, while Hispanics were the least likely to be stopped for speeding.

- Hispanics and Other drivers were significantly more likely to be stopped for moving violations compared to Whites and Blacks.
- Hispanics were significantly more likely to have officers indicate license/registration violations as a reason for the stop compared to all other racial/ethnic groups.
- Blacks and Hispanics were the most likely to be stopped for investigatory reasons and LEADS inquiries, while drivers of Other races were the least likely.

Multivariate statistical analyses were computed to determine the independent effect of race/ethnicity in relation to the post-stop outcomes. The main results of these analyses indicate:

- The strongest predictors of each of the four post-stop outcomes (warnings, citations, arrests, and searches) were the primary legal reason for the stop and the presence of additional violations discovered subsequent to the stop.
- Hispanic drivers were 1.7 times significantly *less* likely than Whites to receive warnings and 1.6 times significantly *more* likely to receive citations than Whites.
- Blacks and Whites were statistically equally likely to receive warnings and citations.
- Although there were statistically significant and strong bivariate relationships between race/ethnicity and arrests/searches, once the other factors in the model are considered, none of the race/ethnicity variables are statistically significant predictors of the likelihood of arrest or search.
 - White, Black, and Hispanic motorists are statistically equally likely to be arrested and searched given similar circumstances.

It is the conclusion of this report that the outcomes received by White and Black motorists during officer-initiated traffic stops conducted between Sept 1, 2007 and August 31, 2008 are not significantly different from one another. This report also demonstrates that Hispanic motorists are significantly more likely than Whites to be issued citations during similar traffic stops, but cannot determine why this disparity exists.

SEARCH & SEIZURE

Department-wide from September 1, 2007 to August 31, 2008, FPD officers conducted searches during 507 (6.9%) of the 7,378 officer-initiated traffic stops. Consent was the most frequent reason for searches across the department (58.6%), followed distantly by incident to arrest (17.2%), other (9.9%), canine alert (9.3%), and probable cause (6.1%). Of those 507 searches, FPD officers successfully seized contraband during 163 searches – an overall search success rate of 32.1%. The most frequent type of contraband seized was drugs (82.2%).

At the department level, the majority of searches conducted were Type III (solely consent) searches (56.7%), while 28.5% and 14.8% were Type I (mandatory) and Type II (discretionary but guided by legal statute), respectively. Analyses based on the type of search indicate statistically significant racial and ethnic disparities in searches across all three search type categories:

- Hispanics were most likely to be searched for mandatory reasons (Type I).
- The most common type of search for Whites (64.6%) and Blacks (56.7%) was Type III (solely consent). Only 14.3% of searches of Hispanics were Type III.
- Across all racial/ethnic groups, Type II (discretionary) searches were the *least* common type of search.

Search success rates across the department varied by the reason for search. The two most successful types of searches were those based on canine alerts (72.3%) and probable cause (64.5%), while searches for mandatory reasons (incident to arrest, 17.2%, and vehicle inventory, 10.0%) were least successful in terms of recovering contraband. Searches based solely on consent were successful in discovering contraband in 30.3% of those searches.

The overall Type II (discretionary) search success rate for FPD was 69.2%, but success rates varied by race/ethnicity:

- Whites had the highest discretionary search success rate at 82.7%, followed by Blacks (50.0%). These differences were statistically significant.
- Only 78 discretionary searches were conducted department-wide.
- FPD administrators should continue to monitor possible racial/ethnic disparities in discretionary search success rates.
- It is the conclusion of this report that, although the trends in discretionary search success rates show racial/ethnic disparities, more data needs to be gathered before any conclusions can be drawn.

Analyses of only consent searches (Type III) revealed few racial/ethnic differences in those asked for consent to search and request refusals:

- Hispanic and “Other” motorists were significantly less likely than White motorists to be asked for consent to search.
- The number of requests for consent to search of Hispanics and Other drivers was too small for stable comparisons regarding their refusals.
- Black and White drivers were statistically equally likely to be asked for consent to search.
- White and Black motorists asked for consent to search were equally likely to refuse to give consent (8.0% and 8.3% of requests were refused, respectively).
- White and Black motorists searched based on consent were statistically equally likely to be in possession of contraband (31.6% and 27.9% of consent searches, respectively).

- The number of consent searches for Hispanics and Other drivers was too small for stable comparisons across racial/ethnic groups. Only one, however, resulted in the seizure of contraband.

The information presented in this report cannot determine the legality of and/or the presence of discrimination in individual searches conducted by FPD officers. Furthermore, caution must be used when interpreting the findings related to searches and seizures because they are bivariate in nature (i.e., they do not take into account other extralegal and legal factors that might have a significant influence over search decisions).

TRAINING

Conversations during the focus group sessions with officers indicated the need for additional training for the Fairfield Police Department. In order to provide the best possible training to suit the specific needs of the FPD, an initial review of the current policies, procedures, and training curricula of the FPD as they related to bias-based policing practices was conducted. This review demonstrated deficiencies and/or the need for refreshers in a number of areas related to bias-free policing strategies and traffic stops more generally.

Based on officers' responses and the review of the material noted above, it was recommended to Chief Dickey that additional trainers from the Cincinnati Police Department be hired to supplement my training curricula on bias-based policing. Chief Dickey and other members of the FPD Command Staff met with the CPD team and discussed the content of the training to ensure both parties understood the expectations and training needs. Based on this conversation, the CPD team (guided by Dr. Engel), specifically tailored the training curricula that was given to FPD officers.

The resulting training was delivered by four professionals with expertise in various areas related to reducing bias-based policing. The material covered during these training sessions was divided into four distinct content areas: 1) national and local trends in bias based policing legislation and research, 2) improving customer service, 3) positive police-citizen relations, and 4) a legal refresher on traffic stops.

Participants in three of the four sessions were asked to complete a course evaluation survey regarding the quality of the training. Ranking the course and instructors on eight specific criteria, the average scores ranged from very good to excellent. All participants surveyed indicated that overall the training was very beneficial or beneficial.

RECOMMENDATIONS

The findings of the statistical analyses examining all officer initiated traffic stops conducted by the FPD during a one year period (Sept 1, 2007 – Aug. 31, 2008) indicate very few racial/ethnic disparities in traffic stop outcomes. When warnings, citations, arrests, and searches are examined, no statistically significant differences were reported

for White and Black motorists. In contrast, some disparities were found for Hispanic motorists. Specifically, Hispanic motorists were 1.7 times significantly *less* likely than Whites to receive warnings and 1.6 times significantly *more* likely to receive citations than Whites. While also more likely than Whites to be searched during officer initiated traffic stops, these searches of Hispanic motorists were overwhelming based on mandatory reasons (e.g., incident to arrest or inventory) and required by departmental policy. Discretionary and consent searches of Hispanic motorists were actually less likely compared to both White and Black drivers. In general, the patterns of outcomes during traffic stops for Black and White motorists were quite similar. In contrast, traffic stops involving Hispanic motorists were somewhat different, although at least some of these differences can be explain through differences in the legal reasons for the stop and departmental policies guiding searches.

Based on these findings, along with the extensive comments given by focus group participants, the following recommendations are provided for consideration by the Fairfield Police Department.

1. Continue data collection and analysis:

It is imperative that the FPD continue the collection of data during officer-initiated traffic stops as part of their permanent policies and procedures. The financial costs to the City to continue this data collection effort are quite minimal given the data collection system is current in place, is relatively easy to maintain, and at least some of the data analyses can be performed by officers within the agency. The continued collection of these data will allow FPD administrators to routinely assess racial/ethnic disparities in traffic stop outcomes and will also signal to the Fairfield community that FPD is a legitimate and professional department committed to ensuring fair and impartial treatment toward all citizens. The trend in legislation across the country is to mandate data collection – as of 2007, 18 states required at least their state police agency to collect traffic stop data. In many of these states that mandate included all state and municipal police agencies. The continued collection and monitoring of traffic stops for evidence of racial/ethnic disparities will demonstrate that the Fairfield Police Department is one of the more progressive and professional police agencies in Ohio, by following the model of other agencies across the country.

Further, it will be important for FPD administrators to revisit the differences in outcomes received by Hispanic motorists compared to White motorists once more data is collected. Currently, Hispanic motorists represent only a small percentage of all traffic stops (4.6%, n=337). For purposes of statistical analyses and comparisons, it will be important to reexamine the outcomes received by Hispanic motorists as more stops occur and more stop outcomes are recorded.

2. Initiate Revised Videotape Review Process:

Several specific recommendations regarding supervisory review of traffic stops captured on MVRs were given to the FPD in February 2008. To provide supervisory oversight of

officer-initiated traffic stops, it is important that supervisors be required to *systematically* examine recordings that are *randomly* selected. The process and instrument developed for FPD supervisors should become part of the required supervisory duties for sergeants and lieutenants.

3. Routinely scheduled traffic stop and bias-based policing training:

Based on the focus group discussions and feedback received from FPD officers after the training was given, it is clear that continual refreshers and updates should become part of the standard in-service training curricula. FPD officers should be routinely updated on legal changes, national trends in research and data collection, officer safety, customer service, and tactics to eliminate racial/ethnic bias.

4. Consider leadership / supervisory training to reduce inconsistencies:

It is recommended that FPD consider providing leadership / supervisory training that is larger than the issues of bias-policing. During the focus groups and informal conversations with FPD officers, the differences in supervisory practices were repeatedly noted as a continual source of frustration for officers. Further, it is believed that these supervisory differences lead to inconsistencies in the adherence to policies and procedures within the agency. Many police agencies across the country are experiencing similar issues with inconsistencies and lack of leadership by field supervisors. There are a number of different trainings available that help to bolster leadership within agencies that the FPD may wish to consider if fiscally feasible. At a minimum, FPD managers must insist on more consistency and provide more directives and oversight to individual field supervisors.

5. Establish committee to review and update written policies and procedures:

There were numerous inconsistencies noted by focus group participants regarding the actual policies and procedures within the agency, along with inconsistencies in the manner which these policies and procedures are implemented across the agency. Therefore, it is recommended that a small committee of FPD officers from various ranks and shifts be assigned to review and update the written policies and procedures for the agency. It is likely that such a committee or group of officers has already been assigned to such a task – if so, it is recommended that their work continue and be disseminated to the field. Once completed, it is essential that FPD administrators provide decisive oversight and discipline to officers that do not adhere to these policies and procedures.

In summary, this report documents the activities over the course of the last 15 months that were designed to reduce racial/ethnic disparities and eliminate any bias-based policing practices by the Fairfield Police Department. These activities included participation in focus groups with researchers; MVR procedural review; initiation, collection, and analyses of traffic stop data; and training of all officers. The FPD were compliant in all research activities and actually became active partners in the process. The traffic stop data collection demonstrates no differences in officer-initiated traffic stop

outcomes for Black and White motorists, but small differences for Hispanic motorists. It is possible that these small differences in the outcomes received by Hispanic motorists are due to legal factors associated with traffic stops that are unmeasured in this study. It is also possible that FPD officers treat Hispanic motorists differently compared to Whites. It is imperative for FPD administrators to further examine these few racial/ethnic disparities in an effort to better determine if bias practices are the source of the disparity. The FPD has undertaken many activities to ensure legitimate and unbiased policing practices for the residents of Fairfield and citizens traveling through the city. It is important that FPD continue its dedication to providing fair and effective policing practices.

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9. APPENDIX A

Appendix A: Informed Consent



Consent to Participate in a Research Study

Research Director: Robin S. Engel, Ph.D.

(513) 556-5850, robin.engel@uc.edu

Title: Identifying and Promoting Best Practices in Traffic Stops

Before agreeing to participate in this research study, it is important that the following explanation of the proposed procedures be read and understood. The information below describes the purpose, procedures, risks, and benefits of the study. It also explains your right to withdraw from the study at any time. It is important to understand that no guarantee or assurance can be made as to the results of the study.

The purpose of this research project is to identify "best practices" within the Fairfield Police Department (FPD) by determining what suspicious indicators used by officers during traffic stops to develop reasonable suspicion are the most and least effective at detecting the criminal activities of motorists. Your supervisors have identified you for participation in this study due to your effectiveness in traffic stops and criminal interdiction activities. You will be one of approximately 5-7 officers taking part in focus group discussions as part of this study. This focus group discussion will require your participation for approximately two (2) hours.

The focus group will be facilitated by Dr. Robin Engel and her staff and will discuss the following topics:

- Types of verbal and nonverbal cues, vehicle characteristics, and motorists' behaviors used to determine suspiciousness
- Types of verbal and nonverbal cues, vehicle characteristics, and motorists' behaviors perceived as inaccurate determinants of criminal activity
- Relevance and perceived accuracy of current traffic stop training
- Perceptions of peers' behaviors and practices considered counter-productive
- Officer perceptions of citizens, supervisors, and management support and impediments regarding traffic stops and the use of criminal interdiction through traffic stops
- Perceptions of the legal limitations on conducting searches and seizures, and
- Perceptions of the existence of racial profiling

The discussions of these topics will be audio taped and the research staff will also take written notes. You may request that the focus group session not be audio taped. The information gained from these focus groups will help identify effective search and seizure practices.

While the research staff will not disclose the specific statements made by any participant in these focus groups, I must inform you of certain risks involved in participating. I cannot protect the identity of those who attended the focus groups, as each of you has been selected by your chain of command, may complete department reimbursement paperwork, and will be known to the other focus group participants. Likewise, I cannot prevent the other focus group members from disclosing statements that were made during the focus group discussions. Therefore, I ask that the other participants maintain confidentiality about what is

said in the focus groups but I am unable to guarantee this confidentiality. I can guarantee that I, along with my research staff, will not violate your confidentiality.

The information collected from these focus groups in the form of audiotapes and notes made by the members of the research team will remain confidential. The audiotapes and researcher notes will be kept in a locked file cabinet in the Dr. Engel's office at the University of Cincinnati and only she and her staff will have access to these materials. The audiotape and notes will be transcribed into written form that will not identify any of the participants by name. After these materials are transcribed the audiotape will be destroyed and the written notes will be shredded. Only the final report, free of any individual identifier information, will be accessible to the FPD command staff or anyone they officially designate.

While you will receive no special direct benefit from your participation in this study, your participation will help improve the effectiveness of the Fairfield Police Department and other law enforcement agencies in the detection and seizure of illegal contraband being transported on public roadways. The information gained from these focus groups may be published in official department reports, training documents, and academic publications; however, no information will be provided that would permit the identification of any specific officer. Your identity will remain confidential unless disclosure is required by law, such as mandatory reporting of child abuse, elder abuse, or immediate danger to self or others.

You may choose not to participate in this study at any time. If you choose not to participate, the research team will not disclose this decision to the Fairfield Police Department.

Again, your participation in this study is voluntary and you may refuse to participate, or may discontinue participation AT ANY TIME, without penalty or loss of benefits to which you are otherwise entitled. You also have the right to refrain from answering specific questions during the focus group discussions. The researchers have the right to withdraw you from the study AT ANY TIME. Your withdrawal from the study may be for reasons related solely to you (for example, not following study-related directions) or because the entire study has been terminated.

If you have any other questions about this study, you may call Dr. Robin Engel at robin.engel@uc.edu or (513) 556-5850. Nothing in this consent form waives any legal right you may have, nor does it release the researcher, the Fairfield Police Department, the University of Cincinnati, or its agents from liability for negligence.

I HAVE READ THE INFORMATION PROVIDED ABOVE. I VOLUNTARILY CONSENT TO PARTICIPATE IN THIS STUDY. I WILL RECEIVE A COPY OF THIS CONSENT FORM FOR MY INFORMATION.

Participant Signature

Date

Signature and Title of Person Obtaining Consent

Date

10. APPENDIX B

11. APPENDIX C

Appendix C: Fairfield Police Department Traffic Stop Data Collection Form & Instructions

	<h2 style="margin: 0;">Fairfield Police Department</h2> <h3 style="margin: 0;">Traffic Stop Data Report</h3>
<p>1. Log Number</p> <p>_____</p>	<p>11. Driver Zip Code</p> <p>_____</p>
<p>2. Badge Number _____</p>	<p>12. Driver Race/Ethnicity</p> <p><input type="checkbox"/> White</p> <p><input type="checkbox"/> Black</p> <p><input type="checkbox"/> Hispanic</p> <p><input type="checkbox"/> Native American</p> <p><input type="checkbox"/> Asian/Pacific Islander</p> <p><input type="checkbox"/> Middle Eastern/Indian</p> <p><input type="checkbox"/> Unknown</p>
<p>3. Date ____ / ____ / ____</p>	<p>13. Number of Passengers</p> <p>_____</p>
<p>4. Time of Stop _____</p>	<p>14. Consent Search Requested?</p> <p><input type="checkbox"/> No <input type="checkbox"/> Yes</p>
<p>5. Location</p> <p>_____</p>	<p>15. Consent Given?</p> <p><input type="checkbox"/> No <input type="checkbox"/> Yes</p>
<p>6. Reason for Stop</p> <p>P S</p> <p><input type="checkbox"/> <input type="checkbox"/> Speeding</p> <p><input type="checkbox"/> <input type="checkbox"/> Moving violation</p> <p><input type="checkbox"/> <input type="checkbox"/> Equipment violation</p> <p><input type="checkbox"/> <input type="checkbox"/> License/regist. violation</p> <p><input type="checkbox"/> <input type="checkbox"/> Investigative stop</p> <p><input type="checkbox"/> <input type="checkbox"/> LEADS inquiry</p> <p><input type="checkbox"/> <input type="checkbox"/> Other _____</p>	<p>16. Search Initiated?</p> <p><input type="checkbox"/> No <input type="checkbox"/> Yes</p>
<p>Amount over Limit</p> <p>_____ in a _____ zone</p>	<p>17. Search Authority?</p> <p><input type="checkbox"/> Consent</p> <p><input type="checkbox"/> Probable Cause</p> <p><input type="checkbox"/> Exterior K9 Search</p> <p><input type="checkbox"/> Incident to Arrest</p> <p><input type="checkbox"/> Other</p>
<p>7. Enforcement Action</p> <p><input type="checkbox"/> None</p> <p><input type="checkbox"/> Citation</p> <p><input type="checkbox"/> Warning</p> <p><input type="checkbox"/> Arrest – OVI</p> <p><input type="checkbox"/> Arrest – Other</p> <p><input type="checkbox"/> Field interview report</p> <p><input type="checkbox"/> Other _____</p>	<p>18. Was K9 Utilized?</p> <p><input type="checkbox"/> No <input type="checkbox"/> Yes</p>
<p>8. Duration of Stop _____</p> <p>(min)</p>	<p>19. Property Seized</p> <p><input type="checkbox"/> None</p> <p><input type="checkbox"/> Drugs</p> <p><input type="checkbox"/> Alcohol</p> <p><input type="checkbox"/> Weapons</p> <p><input type="checkbox"/> Cash</p> <p><input type="checkbox"/> Vehicle</p> <p><input type="checkbox"/> Stolen Property</p> <p><input type="checkbox"/> Other</p>
<p>9. Driver Gender</p> <p><input type="checkbox"/> Male <input type="checkbox"/> Female</p>	
<p>10. Driver Date of Birth</p> <p>____ / ____ / ____</p>	



Fairfield Police Department Traffic Stop Data Report

A. Purpose

1. The traffic stop data report shall be used to record information regarding all contacts an officer has with the public as a result of officer-initiated traffic stops.

B. Special Instructions

1. The form shall be completed in original only, using black ink.
2. A response is required for each block, unless specified below.
3. If the response category "Other" is selected, provide a brief description.
4. Supervisors are required to review and initial the form.

C. Block Instructions

1. Log Number: Record the event number generated for traffic stop.
2. Badge Number: Record officer's three-digit badge number.
3. Date: Record the month, day, and year of the traffic stop (mm/dd/yy).
4. Time of Stop: Record the beginning time of the stop, using military time.
5. Location: Record the exact location of the stop, including road name, specific street address, and/or cross streets.
6. Reason for Stop: Mark all that apply. Column "P" refers to infractions observed prior to the traffic stop. That is, record the initial reason(s) the vehicle was stopped. Column "S" refers to infractions discovered subsequent to the traffic stop. That is, once a stop has been initiated, record all subsequent infractions that are noted (regardless of the decision to issue warnings or citations for these offenses). In addition to prior and subsequent infractions, the amount over the speed limit shall be recorded when applicable.

7. Enforcement Action: Mark all that apply. Criminal summonses are counted as citations. Warnings refer to both official written warnings and verbal warnings. If no enforcement action is taken, select "None."
8. Duration of Stop: Record the length of time (in minutes) that the vehicle occupants are temporarily detained. This period includes the time from when the vehicle is stopped until the occupant(s) are either arrested or released. Time spent filling out paper work shall not be included in the duration of the stop.
9. Driver Gender: Indicate the perceived gender of the driver. The driver should not be asked to supply this information.
10. Driver Date of Birth: Record the driver's year of birth. This information should be taken from the driver's operator license.
11. Driver Zip Code: Record the zip code that indicates the driver's place of residence. This information should be taken from the driver's operator license. Use the code "00000" to indicate a non-U.S. resident.
12. Driver Race/Ethnicity: Indicate the perceived race/ethnicity of the driver. The driver should not be asked to supply this information. The "Unknown" category should only be used in the very rare situations when the officer has no indication whatsoever of race/ethnicity.
13. Number of Passengers: Indicated the number of occupants, excluding the driver, in the vehicle at the time the stop is initiated.
14. Consent Search Requested: Indicate whether or not the officer asked for the driver's permission to search the vehicle. Indicate "Yes" if a consent search was requested, even if the driver refused. If "No," skip to Question 16.
15. Consent Given: Indicate whether or not the citizen gave consent to search when asked for consent by the officer. If Block 14 is marked "Yes," Block 15 must be answered. Indicate "No" if the citizen initially gave consent but later revoked consent. Indicate "No" if the citizen did not give consent when asked, but a search was conducted based on a different search authority. If no consent search was requested, skip to Block 16.
16. Search Initiated: Indicate whether or not the officer searched the vehicle, driver, or other item. If "No," the form is complete. If "Yes," proceed to Block 17.

17. Search Authority: Mark all that apply. This pertains to a search of any person, vehicle, or other item. If no search was performed, skip to Block 18.
18. Was K9 Utilized: Record if canine was used for exterior or interior search of the vehicle.
19. Property Seized: Mark all that apply. Indicate the type of property the officer found and seized from the driver. If no property was seized, indicate "None."

D. Processing

Completed forms should be submitted after every shift to the shift supervisor. The reviewed and approved forms must be forwarded to Lt. Kevin Haddix.

12. APPENDIX D

Appendix D: Fairfield Police Department Course Evaluation Form

**Fairfield Police Department
Course Evaluation Form**

Course: Officer-Citizen Communications Training
Date: June 4, 2008
Instructors: Dr. Robin Engel, Mr. Greg Baker, Lt. Tony Carter, Mr. Barry Webb

We would appreciate your evaluation of this course. Please rate the usefulness of this course using the scale of 1 to 5. On the reverse side please respond to the questions pertaining to the training just completed. This rating will help the instructors to evaluate future course curriculum.

Course Content:	POOR	FAIR	GOOD	V. GOOD	EXCEL
1. Met Stated Course Objectives	1	2	3	4	5
2. Degree of Job Relatedness	1	2	3	4	5

Instructors:

1. Knowledge of the Topic	1	2	3	4	5
2. Ability to Keep You Interested	1	2	3	4	5
3. Use of Clear & Understandable Language	1	2	3	4	5
4. Ability to Manage Allotted Training Time	1	2	3	4	5
5. Ability to Maintain Control of Discussion	1	2	3	4	5
6. Organization of Course	1	2	3	4	5

Overall evaluation of training program – place a check next to the appropriate response.

- Not Beneficial
- Beneficial
- Very Beneficial

(Over)

Comments:

1. What parts of the course did you think were good?

2. What suggestions would you make for improvement?

3. Additional suggestions/comments regarding this course?

Name (Optional) _____