NEW MEXICO SENTENCING COMMISSION

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Specifics & Findings

In this brief: We describe the driving behaviors and characteristics of drivers in four New Mexico counties and profile characteristics of stopped drivers.

Specifically: As indicated in the literature, racial bias can occur at various stages in the police-citizen interaction. Bias may be present in the decision to stop, search, warn, cite, arrest, or use force with a driver.

Main findings:

- We found a weak statistically significant relationship between race/ethnicity, specifically being African American, and being stopped in the four county analyses. We did not have sufficient data by county to conduct county level analyses.

- County of residence, driving behavior, speeding behavior, education, age, type of vehicle, tinted windows, and miles driven per day best profiled routine traffic stops for drivers.

- While there is some evidence racial profiling may occur during the stop and during subsequent searches, arrests, and use of force, the data we collected was limited, prohibiting any analysis or documentation of racial profiling at these points in the stop.

- We were unable to determine if racial profiling was occurring during searches, arrests, or the use of force following a traffic stop.

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Biased Based Policing in Four New Mexico Counties: *A Report in Brief*

In 2007 and in 2008, the New Mexico Legislature authorized funding for the New Mexico Sentencing Commission (NMSC) to study bias-based policing in New Mexico.

The 2007 funding enabled NMSC to survey drivers in two New Mexico counties (Bernalillo County and Lea County) and funding provided in 2008 allowed the NMSC to survey drivers in Curry County and McKinley County. A literature review and a review of legal complaints against law enforcement agencies in the four surveyed counties were also completed.

METHODOLOGY

As indicated in the literature, racial bias can occur at various stages in the police-citizen interaction. Bias may be present in the decision to stop, search, warn, cite, arrest, or use force with a driver.

The literature contains considerable variation in data collection methods, but most studies have been conducted using either telephone surveys or stop forms completed by law enforcement officers during routine traffic stops. Because stop forms are not in widespread use in New Mexico we elected to conduct a telephone survey.

We administered a telephone survey in April 2008 to discover the driving behavior, stop rates, and driver-police interactions among drivers in Bernalillo and Lea Counties, New Mexico. In late August 2008 we administered a similar survey among a smaller sample of drivers in Curry and McKinley Counties.

We collected demographic information from respondents, e.g., age, gender, education, race/ethnicity, and income. We also collected information related to the respondent's driving experience and behavior and we asked drivers about the vehicle they typically drive. We asked, "stopped drivers" about their experience with the police, which allowed us to account for risky driving habits, the number of miles driven, and other behaviors. This information allows us to discuss differences in driving behaviors across racial groups and create a profile of "stopped" drivers for each of the four counties in our surveys.

SURVEYED DRIVERS

We completed 3,201 surveys of drivers in Bernalillo County, Lea County, McKinley

Table 1. Counts of Interviews Conducted, Stops, and Race/Ethnicity Categories for All Respondents and Also By Each of the Four Counties Surveyed.					
	All	Bernalillo County	Curry County	Lea County	McKinley County
Interviews Completed	3,201	1,319	452	975	455
Respondents Stopped in The Last 12 Months	534	140	89	163	142
Race/Ethnicity					
White	2,081	851	315	719	196
African American	80	25	20	29	6
Asian American	21	12	2	3	4
Hispanic	567	293	65	138	71
Native American	199	29	8	17	145
Other/Unknown	253	109	42	69	33

- We were able to document the driving behaviors and characteristics among drivers in the four New Mexico counties and importantly we were able to profile characteristics of stopped drivers

- It would be useful to continue studying the issue of racial profiling in New Mexico in order to better understand whether racial profiling occurs after a routine traffic stop and to better understand the differences between counties.

- Our study points out the problem of using surveys on this topic. The gender and age of the surveyed drivers in our study was generally not representative of all New Mexico drivers.

- The use of a Stop Form by New Mexico law enforcement agencies would collect basic information on every traffic stop conducted by law enforcement officers in New Mexico and would provide a large number of stops with information on the result of each stop that could be studied.

- With Stop Form data, it would be possible to fully explore the prevalence of racial profiling during the stop (e.g. stop reasons and results, searches, arrests, and use of force) and expand the study to include the whole state.

Target Audience: Legislators and legislative staff; state and local government policymakers; law enforcement agencies; prosecution and defense attorneys; and criminal justice researchers.

Table 2. Male and Female Percentages for All Four Counties (Bernalillo, Curry, Lea, and McKinley) From MVD Data and Survey Data

Gender	All Four Counties	
	MVD Data (%)	Survey Data (%)
Male	49.3	39.0
Female	50.7	61.0

County, and Curry County. Bernalillo accounted for the largest number (1,319) and percentage of surveys (41.2%), followed by Lea County with 975 surveys (30.1%), McKinley County with 455 surveys (14.2%), and Curry County with 452 surveys (14.1%).

Because the funding amount was smaller for the surveys of Curry and McKinley counties the number of completed surveys for these two counties is lower. For each county surveyed we were able to collect a sufficiently large sample of surveys for the analyses (Table 1).

Table 1 also provides the total number of respondents stopped and the number that were stopped by county. Last, the table reports the total number of respondents by racial/ethnic category and by county.

In Tables 2 and 3, the gender and age of the respondents who completed the survey was compared to New Mexico Motor Vehicle Division (MVD) data. The study sample is not representative of the driving population. There are 10% fewer males in the sample compared to the population thus, women are over-sampled. The only age category not over-sampled or under

Table 3. Age Category Percentages for All Four Counties (Bernalillo, Curry, Lea, and McKinley) From MVD Data and Survey Data

Age Categories	All Four Counties	
	MVD Data (%)	Survey Data (%)
18 Thru 29	22.4	8.5
30 Thru 39	19.0	14.2
40 Thru 49	19.2	19.0
50 Thru 59	18.5	25.3
60 Thru 69	12.1	17.6
70 Thru High	8.8	15.4

sampled is the "40 thru 49" group. Table 3 exhibits the under sampling in age groups younger than the "40 thru 49" group and over sampling in age groups over this age category. Sampling population error can be attributed to coverage and non-response errors in phone surveys leading to disproportionately more completed surveys from females and the elderly (Groves 1990).

Decision to Stop

Table 4 shows the stop prevalence for different groups of drivers . For drivers in all four counties the stop rate was 14.7% and was low as 10.6% in Bernalillo County and as high as 20.2% in McKinley County. Males were stopped at a higher rate than females in all four counties.

For the entire sample, African-Americans had the highest stop rate (23.1%), followed by Native Americans (20.7%), and Whites (13.9%).

Table 4. Stop Rates for All Drivers, Males, Females, Whites, African Americans, Hispanics, and Native Americans For All Counties, Bernalillo, Curry, Lea, and McKinley Counties

	All Counties	Bernalillo County	Curry County	Lea County	McKinley County
All Drivers	14.7%	10.6%	17.6%	16.7%	20.2%
Gender					
Males	17.9%	12.0%	22.6%	20.7%	25.5%
Females	12.6%	9.7%	14.2%	14.1%	16.8%
Race/Ethnicity					
White	13.9%	10.2%	15.4%	16.0%	20.7%
African American	23.1%	16.0%	* 33.3%	** 24.1%	16.7%
Hispanic	12.9%	10.9%	14.3%	18.1%	9.1%
Native American*	20.7%	17.2%	12.5%	23.5%	21.6%

Note: * 18 respondents. ** 29 respondents

Hispanics had the lowest stop rate (12.9%). When the counties were analyzed separately, the stop rate varied by county. Because of the limited number of stopped minorities by racial/ethnic category by county, the findings are not generalizable to the counties or the state. There is not enough evidence in this table to make a strong conclusion about the differences in stop rates between the different racial/ethnic groups.

We used logistic regression to determine the odds of being stopped. Table 5 shows the effects of multiple variables (demographics, car characteristics, and driving behaviors) on the odds of being stopped within the last twelve months. The "Odds Ratio" column displays the effect of each explanatory variable on the likelihood of being stopped in the last twelve months. An odds ratio less than one decreases the odds of being stopped in the last twelve months, while an odds ratio greater than one increases the likelihood of being stopped in the last twelve months. The explanatory variables were used in the model because of either theoretical importance or statistical importance. The most important part of this analysis is how the probability of being stopped in the last twelve months is affected by increasing or decreasing values of the explanatory variables.

The logistic regression model presented in Table 5 displays the reasons for being stopped in the last twelve months. Statistically significant variables include: county of residence, speeding and driving behaviors, driving to visit a friend in the last week, type of vehicle, vehicles with tinted windows, miles driven per day, education, and age. Being African-American was weakly statistically significant in the model. No other racial/ethnic group was statistically significant. This finding provides limited evidence that race/ethnicity specifically being African-American was related to being stopped and different than the reference group "White. The most statistically significant explanatory variables were county of residence, type of vehicle, speeding, and driving behaviors.

All three counties, Curry, Lea, and McKinley, were highly statistically significant compared to Bernalillo County. Each had a high odds ratios with McKinley County having the highest ratio in the model at 2.03. This means in the last twelve months residents in McKinley County were slightly more than twice as likely to be stopped compared to residents in Bernalillo County. Speeding behavior (1.09) and driving behavior (1.25) had highly significant odds ratios that were above one. Respondents who self-reported speeding or driving poorly were most likely to be stopped. Respondents who drove trucks (2.06) were much more

Table 5. Logistic Regression Using the Following Variables to Explain Being Stopped in the Last 12 Months (Dependent Variable)

Variables	Odds Ratio	P-Values
Education		
Less than High School Degree	1.08	0.826
Some College	1.51	0.018
Bachelor Degree	1.96	0.000
More than a Bachelor Degree	1.92	0.003
Age	0.98	0.000
Ethnicity/Race		
African-American	1.68	0.088
Hispanic	0.92	0.589
Native American	1.34	0.248
County of Residence		
Lea County	1.91	0.000
Curry County	1.98	0.000
McKinley County	2.03	0.000
Drove To Visit A Friend in the Last Week	1.39	0.008
Type of Vehicle		
Car	1.93	0.009
Truck	2.06	0.007
SUV	1.94	0.014
Vehicles with Tinted Windows	0.65	0.001
Miles Driven per Day	1.00	0.002
Speeding Behavior	1.09	0.000
Driving Behavior	1.25	0.000

Notes: Reference Variables in Parentheses for the Following Categories: Education (High School Degree/GED), Ethnicity/Race (White), County (Bernalillo), and Type of Vehicle (Other Type of Vehicle; e.g. Motorcycle, Van, Etc.)
Though, more variables were used in the analysis we only present those that are statistically significant (except for the race variables).

likely to be stopped than respondents who drove other types of vehicles.

Findings from this study using survey data provides limited evidence that racial profiling is occurring with the decision to stop individuals. While this is true the most statistically significant explanatory variables were county of residence, type of vehicle, and speeding and driving behaviors.

After the Stop

The descriptive analysis of stop reasons and results provides initial evidence of trends that may indicate racial profiling during these two different points during stops. However, financial and time constraints prohibited further analyses because the number of respondents reporting a stop in the last twelve months was only large enough to permit more sophisticated analysis if time consuming model checking techniques were employed. Even though it is possible to analyze these points of the stop in more detail, the small number of respondents makes it very unlikely any

conclusive results would be reached. With more information, most productively collected from stop forms, we could more clearly measure the prevalence of racial profiling at the decision to stop, search, warn, cite, arrest, or use force with a driver.

While there is some variation in the items collected, most stop forms include information regarding the police organization; the time, place, and reason for the stop; demographic information (age, race, gender) of the officer and the stopped person(s); whether a search was conducted; the result of the search if it was conducted; and the disposition of the stop.

Our analysis of searches, arrests, and the use of force was preliminary and limited to descriptions because the telephone surveys did not provide us with a large enough sample and information about stops to use more sophisticated statistical techniques. Some studies have shown that during these three points in routine traffic stops racial profiling occurs. However, the number of respondents stating they experienced any of these three outcomes was so low that it was not possible to detect trends within the data.

Conclusion

Several important findings result from this study of racial profiling during traffic stops, based on a survey of residents in four New Mexico counties. First, we found limited evidence of racial profiling, specifically being African-American, during traffic stops in the analysis of the four New Mexico counties. Second, we found county of residence, driving behavior, speeding behavior, education, and type of vehicle best profiled routine traffic stops for drivers. It would be useful to further study the effect of county of residence. Third, while there is some evidence that racial profiling may be occurring during the stop and during subsequent searches, arrests, and use of force, the data we collected was limited, prohibiting a detailed analysis of racial profiling at these points in the stop. A large sample of

stopped drivers is necessary to reliably and validly study racial profiling associated with a traffic stop. Fourth, we were able to document the driving behaviors and characteristics among drivers in the four New Mexico counties and importantly we were able to profile characteristics of stopped drivers. Fifth, we found our study sample was not representative of the driving population. There were 10% fewer males in the sample compared to the population and there were almost 14% fewer 18 to 29 year olds in the sample compared to the driving population.

We believe it would be useful to continue studying the issue of racial profiling in New Mexico to better understand whether racial profiling occurs during and after a traffic stop and to better understand the differences between counties and law enforcement agencies. The use of a Stop Form by New Mexico law enforcement agencies would collect and provide basic information on every traffic stop conducted by law enforcement officers in New Mexico. This information could be studied and compared across counties, law enforcement agencies, age, gender and race. This method would allow the study of this issue to be expanded statewide.

Works Cited

Groves, Robert M. "Theories and Methods of Telephone Surveys." Annual Review of Sociology. Vol. 16, pp 221-240, 1990.

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