

Illinois Traffic Stops Statistics Act 2010 Annual Report: Executive Summary



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July 1, 2011

Introduction

This is the seventh annual report of the Illinois Traffic Stop Study. It is prepared by the Center for Research in Law and Justice at the University of Illinois at Chicago (UIC) for the Illinois Department of Transportation (IDOT). This report describes statewide results and related issues. A separate document includes the results from each of the agencies that participate in the study.

This report examines several items:

- Reporting procedures
- Agency participation
- Stop and citation data
- The ratio of stops of minority drivers to the estimated minority driving population
- The reasons for traffic stops
- The duration of traffic stops
- The outcome of traffic stops
- Consent searches
- Quality control issues

Illinois Traffic Stop Study Procedures

Since January 2004, police agencies in Illinois have been required to submit data about traffic stops to the Illinois Department of Transportation. This requirement is in place through 2015.¹ A “traffic stop” occurs when an officer stops a motor vehicle for a violation of the Illinois vehicle code, or for a local traffic violation. The Traffic Stop Study does not include citations arising from traffic crashes, citations from automated enforcement devices, or in cases in which an officer stops a vehicle that has been linked to a specific crime, such as a vehicle wanted in connection with a robbery²

Our analysis of traffic stops in Illinois is based on the following data elements:

- Race of driver
- Reason for the stop
- Duration of the stop
- Outcome of the stop
- Whether a consent search was requested and conducted
- Whether contraband was found during the consent search

Agencies must submit traffic stop data for the calendar year to IDOT prior to March 1 of the following year. After a preliminary analysis is conducted by UIC the results are posted on a secure site at IDOT so that each agency may review its own results. Agencies have approximately ten days to identify possible errors in the report and / or to submit comments that are attached to agency reports.

¹ Public Act 096-0658

² If an officer uses a traffic law violation as a pretext to stop a “suspicious” vehicle, that stop should be reported to IDOT.

Agency participation

In 2010, 982 law enforcement agencies in Illinois submitted traffic stop data to IDOT. This number is up from 2009 when 970 agencies submitted data. The following thirty-five agencies failed to comply with the data submission requirement:³

ANNA POLICE	MAQUON POLICE
ASSUMPTION POLICE	MCNABB POLICE
BLUFFS POLICE	NAPLATE POLICE
BUFFALO-MECHANICSBURG POLICE	ODIN POLICE
CHADWICK POLICE	PATOKA POLICE
CHRISMAN POLICE	PERCY POLICE
DALLAS CITY POLICE	SAN JOSE POLICE
DOLTON POLICE	SHELDON POLICE
DUNFERMLINE POLICE	SPILLERTOWN POLICE
ENFIELD POLICE	ST.FRANCISVILLE POLICE
FAYETTEVILLE POLICE	SUMMERFIELD POLICE
FILLMORE POLICE	THOMSON POLICE
GREAT LAKES NAVAL STATION	TISKILWA POLICE
HURST POLICE	TOULON POLICE
JOPPA POLICE	VALIER POLICE
KILBOURNE POLICE	WARSAW POLICE
KINMUNDY POLICE	WESTFIELD POLICE
LUDLOW POLICE	

Table 1 Non-complying Agencies

Traffic Stops

In 2010 law enforcement agencies in Illinois conducted 2,377,851 traffic stops. This is 92,703 fewer stops than 2009, or a 4% reduction. We observed significant reductions in stops in many agencies. The Chicago Police Department, for example, conducted 31,470 fewer stops in 2010 than in 2009, a 16% reduction. Figure 1 illustrates the number of traffic stops and citations for the years 2008-2010 on a statewide basis.

³ In addition to those agencies that fail to submit data, there are some agencies in Illinois that do not make any traffic stops, and thus they are not included in this analysis.

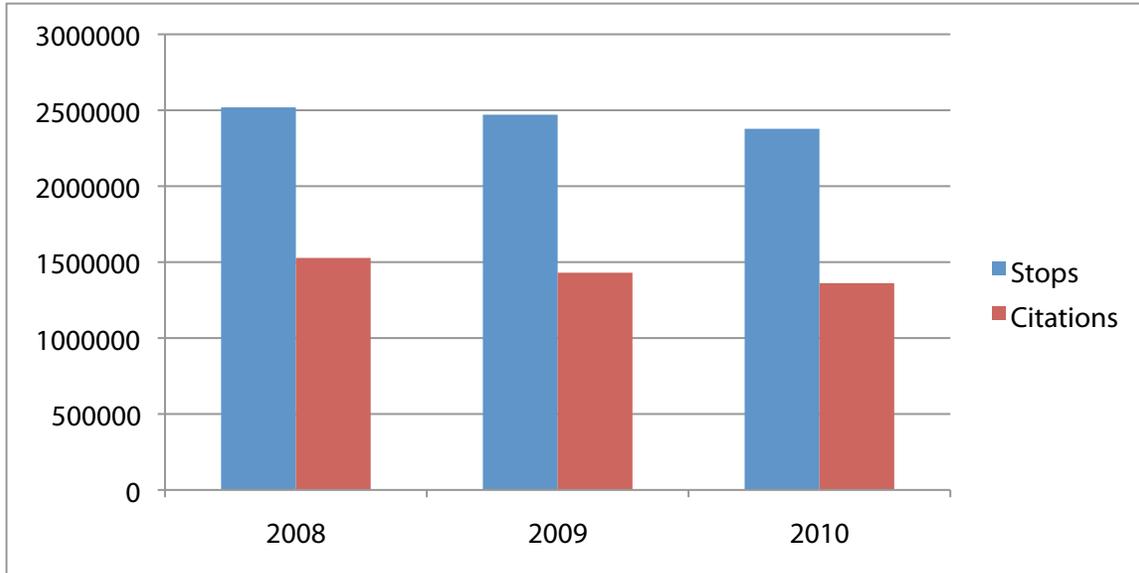


Figure 1 Statewide Traffic Stops and Citations 2008-2010

We now turn to the relationship between traffic stops and driver race. Figure 2 illustrates the distribution of traffic stops and citations in Illinois by race for 2010.

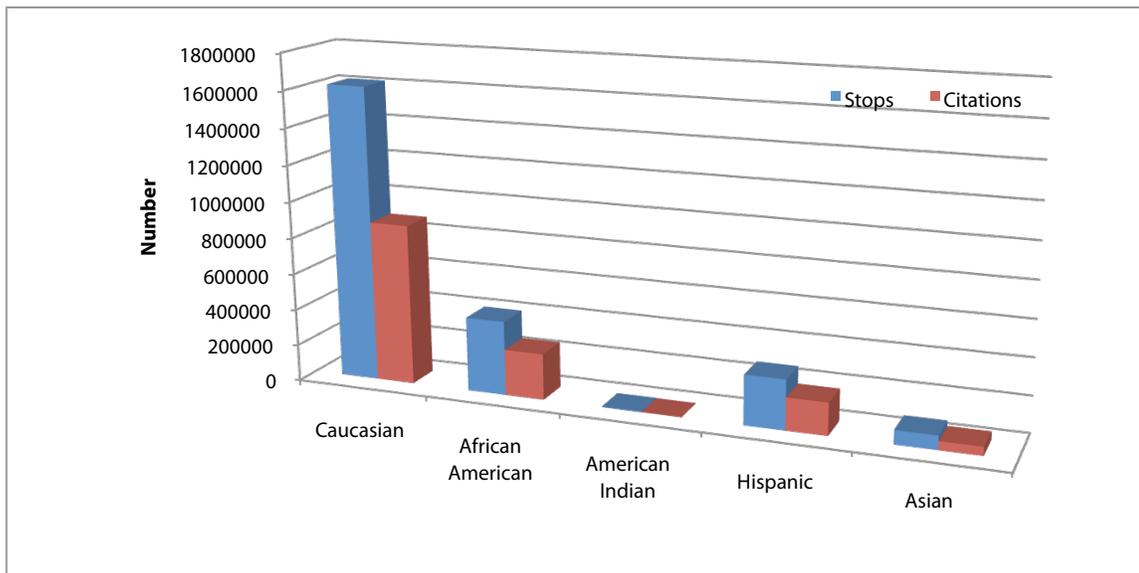


Figure 2 Statewide Stops and Citations by Race 2010

Ratios

Our analysis uses several measures to test the extent to which race plays a part in traffic stops. We have classified these measures as “pre-stop” measures and “post-stop” measures. Pre-stop measures examine behaviors related to the stopping of the vehicle, and post-stop measures illustrate what happens after the vehicle has been stopped and the officer contacts the driver.

The first pre-stop measure is the “ratio”. This measure looks at the likelihood that minority drivers will be stopped by a law enforcement agency. To quantify this likelihood we calculate the ratio between the percentage of minority stops that an agency conducts and that community’s estimated driving population, or as it is often called, the “benchmark”.⁴

To illustrate this idea, consider an agency in which 22% of traffic stops involved minority drivers. In this same community the estimated driving population was 20%. The ratio for this agency would be 22/20 or 1.1. In other words, in this community, a minority driver is 10% more likely to be stopped than we would expect based on the estimated minority driving population. A ratio of 2, for example, would indicate that a minority driver was twice as likely to be stopped than we would expect.⁵

In 2010 the statewide ratio was 1.12, unchanged from 2009. Figure 3 illustrates the distribution of ratios across the reporting agencies. As we can see 58% of the law enforcement agencies had ratios below 1.25, while 20% had ratios of 2 or greater.

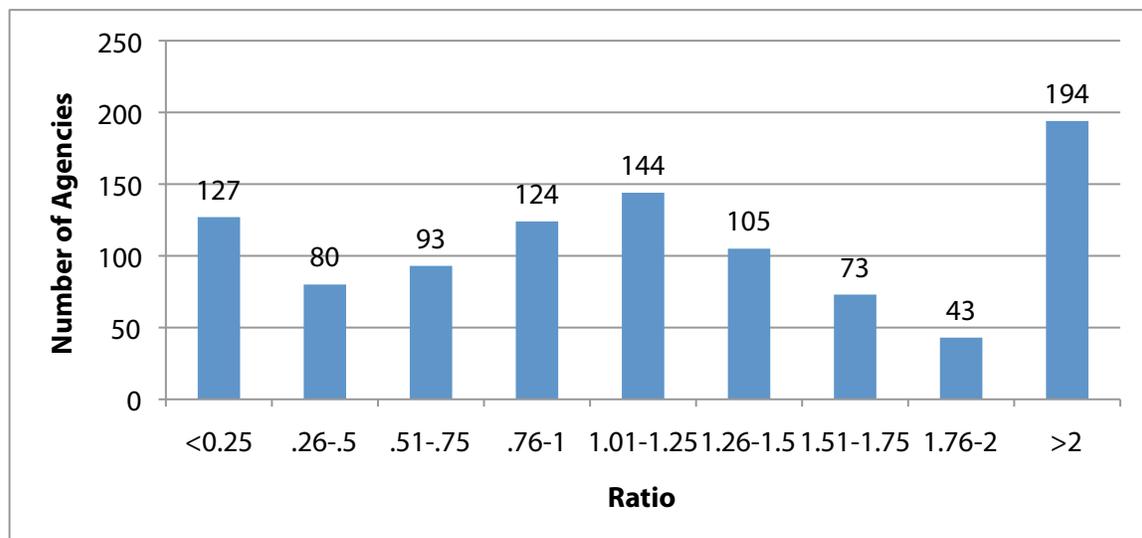


Figure 3 Distributions of Ratios by Agency

⁴ For a detailed description of the construction of the estimated driving population see the 2004 Annual Report available from IDOT.

⁵ A ratio of zero occurs when an agency makes no stops of minority drivers.

Reason for Stop

The second pre-stop measure is the reason for the stop. We are seeking to determine whether race is a determinant factor in the decision to make a traffic stop. To do this we examine the distribution of reasons within race, assuming that if race is not a factor the distribution of reasons within each race will be similar. This result is illustrated in Figure 4. As we can see, on a statewide basis minority drivers are less likely to be stopped for a moving violation than Caucasian drivers, but the differences are not very large, and the distribution is very similar to prior years.

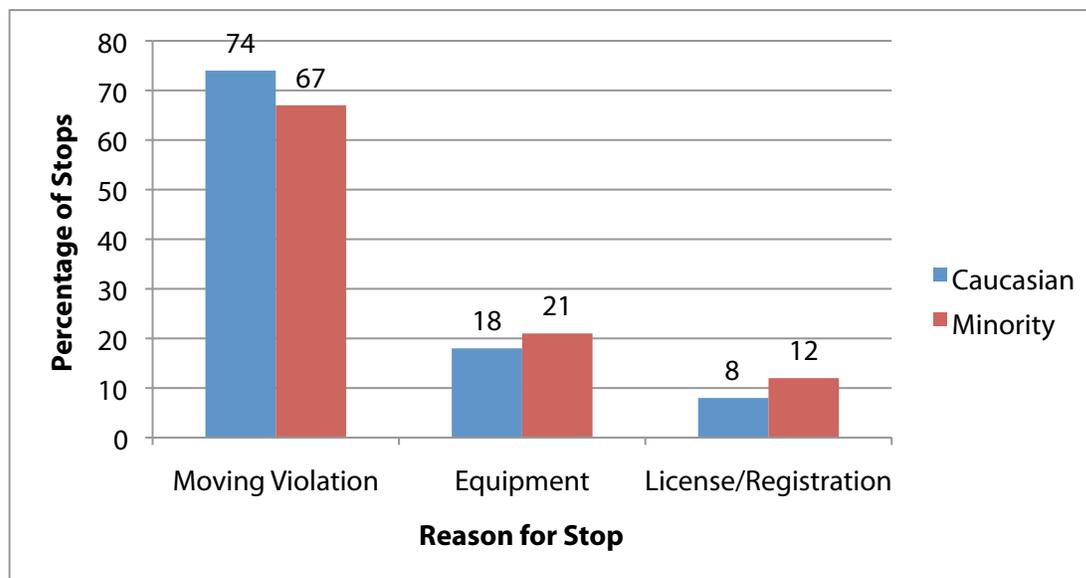


Figure 4 Reasons for Stop by Race

Duration of Stop

Our first post-stop measure is the duration of the stop. Post-stop measures may be more instructive because by this point in the encounter the officer has contacted the driver and drawn a conclusion about the driver's race.

Since January 2007, police officers have been required to include data about the duration of traffic stops. The purpose of adding this data element was to test whether minority drivers are subjected to longer stops than Caucasian drivers.

In our analysis we included two measures of average duration, the *mean* and *median*. The mean is susceptible to extreme values. That is, an unusually long traffic stop can cause the mean to be larger, and thus it may not be representative of a central or average value. The

median represents the value *in the middle* of the ordered distribution.⁶

In 2010 the mean duration for stops of Caucasian drivers was 11 minutes and for minority drivers it was 13. The median duration for both groups was 10 minutes.

Figure 4 illustrates the mean and median duration times by race for statewide data.

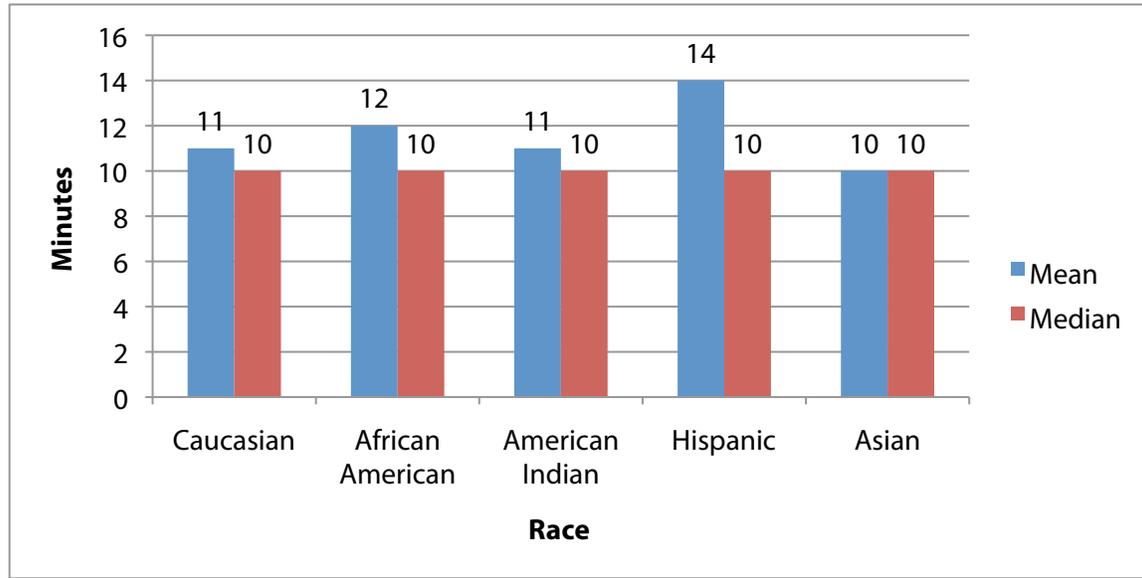


Figure 5 Mean and Median Duration Times by Race

Outcome of Stop

The next post-stop measure is the outcome of the stop. We use three categories to define the outcome: citation, written warning, and verbal warning/stop card.⁷ The following figures illustrate the results of this analysis. Figure 6 compares Caucasian drivers and minority drivers on the three possible outcomes. Figure 7 looks at citation rates for individual races. These figures illustrate that there are different outcomes for minority drivers, and particularly, that minority drivers are more likely to be cited than Caucasian drivers.

⁶ If an agency finds big differences between the mean and median duration times it is important to closely examine the data to determine whether there are real differences by race or anomalies related to data collection, such as a few very long stops.

⁷ Not all agencies issue written warnings.

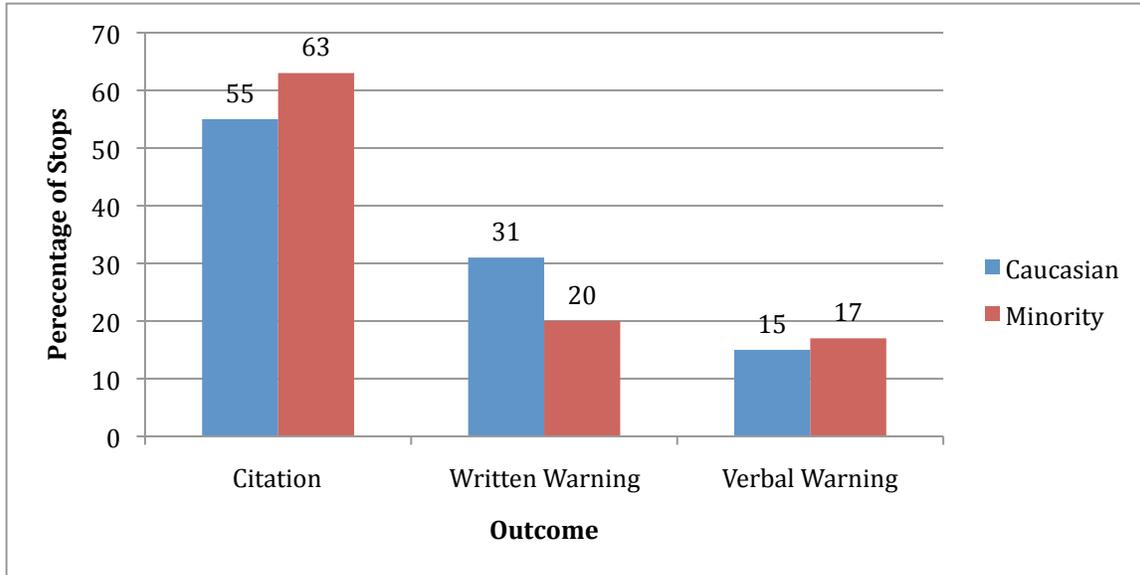


Figure 6 Outcomes of Stops by Race

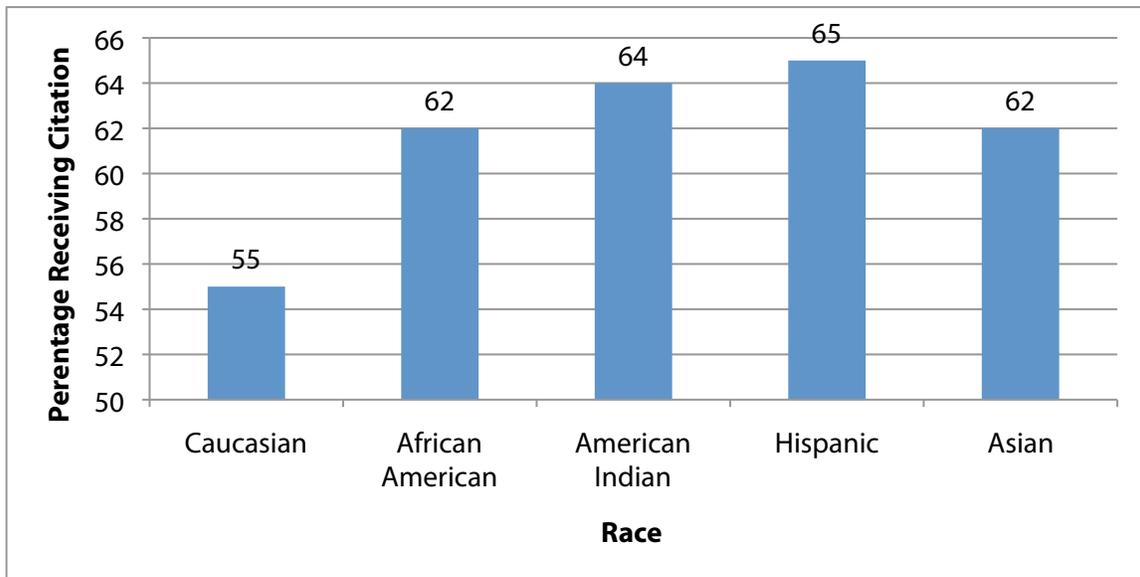


Figure 7 Outcomes by Individual Race

Consent Searches

The final post-stop analysis examines consent searches. Consent searches are an important element in the examination of bias in traffic stops. Police officers have many legal justifications for searching motor vehicles without a warrant. Courts have, in general, given police officers wide latitude in conducting such searches, because when the vehicle is "released" any evidence in the vehicle may be unrecoverable. We are particularly interested in consent searches, those in which the decision to request a search is largely that of the individual officer.

In prior reports we have demonstrated that consent searches are applied disproportionately by race in Illinois. This year's findings are similar. We begin by examining how often consent searches take place. In our analysis we treat the consent search as a four step-process:

- Was a consent search requested?
- Was permission to conduct the search granted?
- Was the search conducted?
- Was contraband found during the consent search?

In 2010, police officers requested 25,294 consent searches. Figure 8 illustrates the information about how those searches are conducted for all drivers. As we can see, 82% of requests for consent search result in permission. After having obtained permission officers conduct searches 96% of the time. Thus, the actual number of searches conducted (19,949) represents less than 1% of all stops.

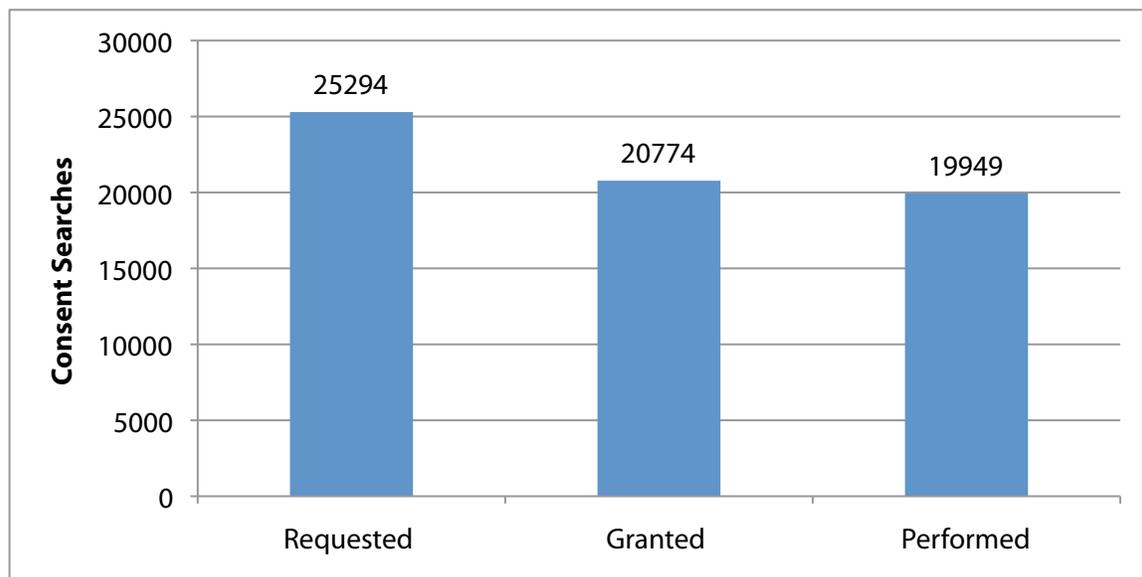


Figure 8 Consent Search Process-All Drivers

Table 2 illustrates the consent search process for each race.

	Caucasian	African American	American Indian	Hispanic	Asian
Stops	1617633	407665	3670	271835	75869
Requested	14168	6687	22	4082	335
Granted (% of Requested)	11039 (78%)	5751 (86%)	21 (95%)	3657 (90%)	306 (91%)
Performed (% of Stops)	10599 (.6%)	5517 (1.4%)	21 (.6%)	3512 (1.3%)	300 (.4%)

Table 2 Consent Search Process by Race

There are several important observations related to Table 2:

- Consent searches are conducted very infrequently
- Minority drivers are more likely to grant permission to conduct a consent search than are Caucasian drivers
- Consent searches of vehicles driven by African-Americans and Hispanics are twice as likely to be the subject of a consent search that those driven by Caucasians

Next we examine whether a consent search resulted in a seizure of contraband, defined as drugs, drug paraphernalia, alcohol, weapons, stolen property or "other" contraband. Knowing whether or not contraband is found allows us to calculate the "hit rate," or the likelihood that a consent search results in the seizure of contraband.

In 2010 when the vehicle of a Caucasian driver was consent searched, police officers found contraband **25%** of the time. By contrast when a vehicle driven by a minority driver was consent searched, officers found contraband **19%** of the time. In Table 3 we describe the hit rates by individual race.

	Caucasian	African American	American Indian	Hispanic	Asian
Stops	1617633	407665	3670	271835	75869
Performed	10599	5517	21	3512	300
Found (% of searches)	2702 (25%)	1132 (21%)	5 (23%)	552 (16%)	41 (14%)

Table 3 Consent Search "Hit Rates" by Race

Another way to think about the relationship between race and hit rate is to calculate the *conditional probability*. That is, we calculate the probability of finding contraband given the probability of having been consent searched. These results are illustrated in Figure 9. This analysis allows us to consider "yield" from searches given different probabilities of search. For

example, the likelihood of finding contraband in the vehicle driven by a Caucasian is nearly twice as great (25%) as that of a vehicle driven by a Hispanic (13%).

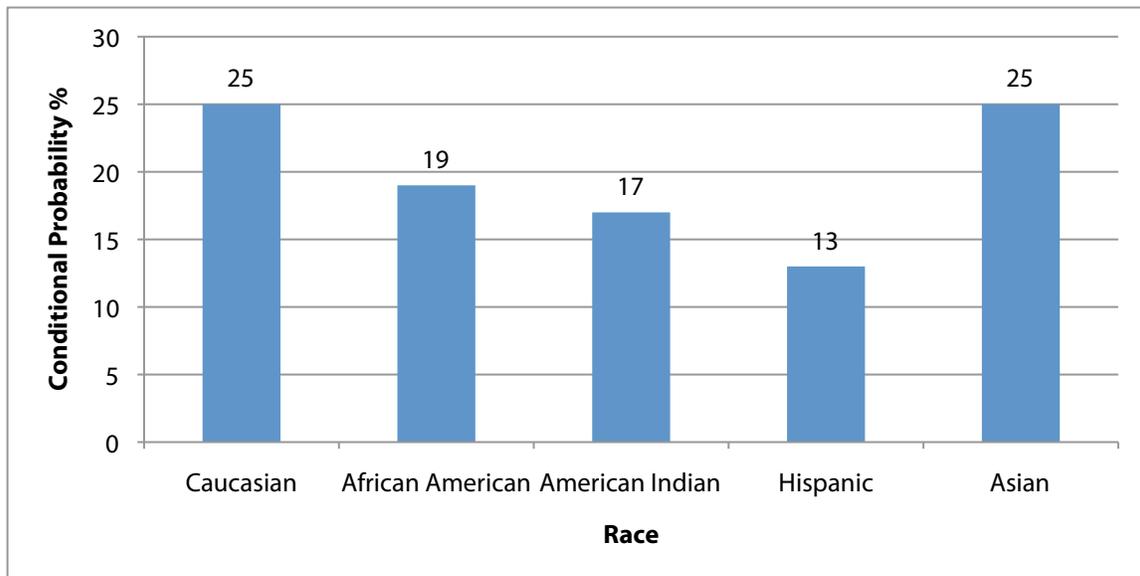


Figure 9 Conditional Probability of Contraband by Race

Quality Control

Like any large data collection endeavor, the Illinois Traffic Stop Study must work to ensure data quality and reliability. This is particularly challenging because of the diverse group of law enforcement agencies participating. In Illinois the law enforcement agencies are required to ensure the accuracy of the reports they submit.

There are several things that agencies can do to ensure data accuracy and reliability. First, it can be useful to compare traffic stop data with information from computer aided dispatch (CAD) systems. In general, when an officer makes a traffic contact, the dispatcher will record information about that stop. At minimum the number of stops in the dispatch information system should align with the number of stops in the IDOT submission. The officer may have also provided information about the stop for entry into the CAD system (occupants, outcomes, searches) and that information can be used to validate IDOT data.

A second approach to validating data is to compare stop data with other archival sources. For example, an agency could select a sample of stops and compare the information recorded about a driver with other departmental records or with the Secretary of State.

Another technique to validate data is to solicit feedback from drivers through surveys conducted of stopped motorists. A letter or post card to drivers can be used to obtain this information, or drivers can be asked to complete an on-line questionnaire. This survey may provide an opportunity to gain general knowledge about the traffic encounter, as well as specific information so as to compare the outcomes cited by drivers with the outcomes in the

IDOT data. For example, it can be used as a method to ascertain whether or not the officer searched the vehicle.

Finally, it can be useful for agencies to periodically review in-car video systems to compare images from the traffic stops with the data submitted concerning the stop.

Appendix: Interpreting Agency Reports

In this section we illustrate how to interpret an agency report. There are two components to each report. The first provides an analysis of stops by race on several measures. The second part provides the “raw” data that is used to conduct the analysis. The analysis section has four parts. The first part of the report provides summary information on the number of stops of Caucasian and minority drivers, the estimated minority driving population for that community, the duration of stops, and the ratio.

The next part of the report provides information about the reason for the stop. The percentages provided describe the distribution *within each race*. For example, in the following report we observe that there were 652 stops of minority drivers for equipment violations. This represented 22.74 % of all the minority stops.

In the third section we describe the outcome of the stop. You should note that not all agencies issue written warnings, and thus in these departments each stop will be classified as either a citation or a verbal warning/stop card.

Finally, we can see information about consent searches. Although we include consent search data for all agencies, readers should take great care in drawing conclusions when an agency has fewer than 50 consent searches per year.

ILLINOIS TRAFFIC STOP STUDY, 2010	
Agency:	ARLINGTON HEIGHTS POLICE

Stops		
	Caucasian Drivers	Minority Drivers
Total Stops	7533	2867
Percentage Stops	72.43	27.57
Duration (Mean\Median)	8\6	10\7
Estimated Minority Driving Population		23.64
Ratio		1.17

Reason for Stop				
	Caucasian Drivers		Minority Drivers	
Total	7533		2867	
Moving Violations	5356	71.10%	1894	66.06%
Equipment Violations	1291	17.14%	652	22.74%
Licensing / Registration Violations	886	11.76%	321	11.20%

Outcome for Stop				
	Caucasian Drivers		Minority Drivers	
Total	7533		2867	
Citation	4834	64.17%	1557	54.31%
Written Warning	36	0.48%	18	0.63%
Verbal Warning/ Stop Card	2663	35.35%	1292	45.06%

Consent Searches				
	Caucasian Drivers		Minority Drivers	
Total	7533		2867	
Requested	20	0.27%	15	0.52%
Granted	17	85%	15	100%
Performed	17	100%	14	93.33%
Found	4	23.53%	4	28.57%

Key Indicators	Total	Caucasian	African American	Am. Indian	Hispanic	Asian	N/S	
Stops	10400	7533	544	17	1423	883	0	
Duration(Mean/Median)	8\6	8\6	9\7	7\5	11\8	8\6	0\0	
Reason For Stop	Moving	7250	5356	331	15	866	682	0
	Equipment	1943	1291	127	1	383	141	0
	License	1207	886	86	1	174	60	0
	N/S	0	0	0	0	0	0	0
Outcome Of Stop	Citation	6391	4834	270	10	720	557	0
	Written Warning	54	36	3	0	11	4	0
	Verbal Warning/ SC	3955	2663	271	7	692	322	0
	N/S	0	0	0	0	0	0	0
Consent Searches	Requested	35	20	2	0	13	0	0
	Granted	32	17	2	0	13	0	0
	Performed	31	17	2	0	12	0	0
	Found	8	4	0	0	4	0	0