

HAVE THE BURLINGTON POLICE MADE PROGRESS IN REDUCING RACIAL
DISPARITIES IN TRAFFIC POLICING? A COMPARISON OF 2009-10 AND 2011-12
DATA¹

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This document provides an analysis of Burlington Police Department (BPD) race data on traffic stops, arrests, and searches in 2011-12. The results are compared to those reported in Seguino, Brooks, and Mitofsky (2012) for 2009-10. Other jurisdictions in the 2009-10 study have not yet provided a summary of their results, and therefore this brief only references Burlington.

In order to calculate the rate at which drivers are stopped by race/ethnicity, we need up-to-date population data. This presents a challenge since the Census was conducted in 2010, and the racial/ethnic composition of the city may have changed since that time. One source of information for 2011 and 2012 is the American Community Survey (ACS), which reports annual data on population by race and ethnicity for Chittenden County. We extrapolate from the Chittenden County data in order to generate estimates of Burlington's ethnic composition in 2011 and 2012. In

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particular, we assume that the annual change in population of each ethnic group in Burlington is identical to the percentage change at the county level.²

Stop Rates

Table 1 compares traffic outcomes by race/ethnicity for 2009-10 and 2011-12. There are several methods for assessing racial disparities in stop rates. One straightforward method is to compare the racial shares of traffics stops (and post-stop outcomes) with the share of each racial group in the population based on Census or ACS data. We use that method here. The share of stops relative to share of population is calculated only for Blacks, Asians, and Whites, while the category of Hispanics is excluded. This is because the Census/ACS and the police officers collecting data on traffic stops do not use comparable methods of classifying drivers as Hispanic.

For 2011-12, the ratio of percent stops to percent of estimated population of Whites modestly declined to 97.2% from 98.2% in 2009-10. The Asian share of stops relative to share of population has increased to 99.4%. That is, Asians were stopped at a rate roughly commensurate with their share of the population in 2011-12. Blacks' share of traffic stops, however, continues to exceed their share of the population. Specifically, Blacks comprised 3.2% of the population in 2009-10 but were 6.5% of drivers stopped. In 2011-12, Blacks were 7% of those stopped, while their share of the population rose to 4%. This implies that Blacks were over-stopped relative to their share of the population by 75.5% in 2011-12. This represents a decline from 2009-10 (during which time Blacks were stopped at double their share of the population). Nevertheless, this demonstrates a significant continuing racial disparity in traffic stops.

Table 1. Burlington Stop Rates by Race/Ethnicity, 2009-10 and 2011-12

	Whites	Blacks	Hispanics	Asians
Population share				
2009-10	91.1%	3.2%		3.9%
2011-12	90.9%	4.0%		3.4%
Share of Traffic Stops				
2009-10	89.5%	6.5%	0.9%	2.5%
2011-12	88.4%	7.0%	0.7%	3.4%
Stops/Population				
2009-10	98.2%	202.8%		63.8%
2011-12	97.2%	175.5%		99.4%

² The data show that the growth rate of Whites, Blacks, and Asians in the county from 2010 to 2012 were, respectively, 0.7%, 27.7%, and 7.0%. Note that while the data for 2009-10 are for the population 18 and over, the ACS data are for the total population.

Post-Stop Outcomes

Police officers often state they do not know the race of a driver before a stop. Therefore, post-stop outcomes are of much interest. The data in Table 2 summarize post-stop outcomes in a variety of areas. One way to evaluate possible racial differences in post-stop outcomes is to compare the percentage of drivers receiving a warning versus a citation (ticket). The data in Table 2 show that Blacks and Hispanics were less likely to receive warnings than Asians and Whites in 2009-10. The disparity widened in 2011-12, with only 65.9% of Blacks and 70.0% of Hispanics receiving warnings, compared to 74.0% of Whites and Asians. Police officers gave Blacks and Hispanics citations at a higher rate than Whites and Asians in 2009-10, and this pattern continued in 2011-12. In particular, in 2011-12, officers gave 32.8% of Black drivers citations compared to only 24.7% of Whites. A larger share of Hispanics also received citations (30.0%). From 2009 through 2012, police officers were less likely to give Asians citations than all other racial/ethnic groups.

Table 2. Post Stop Outcomes

	Whites	Blacks	Hispanics	Asians
Ticket rate				
2009-10	31.4%	35.8%	33.8%	29.7%
2011-12	24.7%	32.8%	30.0%	23.1%
Warning rate				
2009-10	63.9%	61.2%	63.8%	69.5%
2011-12	74.0%	65.9%	70.0%	74.0%
Arrest rates	Whites	Blacks	Black/White Ratio	
2009-10	1.4%	2.4%	165.5%	
2011-12	1.1%	1.3%	113.5%	
Search Rate	Whites	Blacks	Black/White Ratio	
2009-10	1.7%	3.5%	205.9%	
2011-12	0.9%	2.3%	267.1%	
Hit Rate in Searches with Probable Cause				
2009-10	93.0%	60.0%	64.5%	
2011-12	79.3%	57.4%	72.4%	

Racial disparities in arrest rates, however, show improvement. While in 2009-10, Black arrest rates were almost double those of Whites, they are only modestly higher in 2011-12 (1.3% for Blacks, compared to 1.1% for Whites).

Search rates continue to exhibit a wide disparity with police officers searching Blacks at more than two and a half times the rate of Whites in 2011-12, compared to

double the rate in 2009-10.³ The total number of searches may be seen as quite low (a total of 9 for Blacks compared to 43 for Whites, Table A.1 in appendix). That said, it is the total number of stops that matters for statistical reliability. The total number of stops is very large (393 stops of Blacks and 5033 stops of Whites), and thus search rates can be estimated from these data with statistical reliability.

A major consideration in assessing racial disparities is the percentage of searches in which contraband is found (this is called the hit rate). Minority hit rates that are lower than White hit rates are an indication that police are over-searching minorities (or under-searching Whites). We look at hit rates for only searches with probable cause because there were very few searches with reasonable suspicion in 2011-2012. Probable cause requires stronger evidence than reasonable suspicion. In the case of searches with probable cause, hit rates fell for Whites and Blacks from 2009-10 to 2011-12. Black hit rates were lower than White rates, however, a disparity that suggests there is some component of racial bias at play.

Conclusion

Perceptions of disparate police treatment in Burlington have been the impetus behind data collection on traffic stops. The data in this report, collected by police officers during traffic stops, are consistent with those perceptions. The Burlington Police Department continues to register disparities in traffic stops and outcomes by race and ethnicity. The most significant disparity we can identify is in the treatment of Black and White drivers. Although stop rate disparities have declined from 2009-10 to 2011-12, Blacks continue to be over-stopped relative to their share of the estimated population and Whites under-stopped (results that are statistically significant).

Comparatively speaking, the racial disparities in stop rates in Burlington are relatively high. Table 3 summarizes comparisons with other cities and states in order of declining Black racial disparities. Burlington's ratio of stop to population shares is significantly higher than a number of other states, including West Virginia, North Carolina, Illinois, Texas, and Lansing, MI. While the list of comparison states is not exhaustive, we can observe that Burlington's stop rates are higher than a number of other states.

Table 3. A Comparison of Racial Disparities in Traffic Stops: Share of Stops Relative to Share of Population, various years.

Location and year of study	White	Black	Asian
Springfield, MO (2011)	97%	240%	64%
Portland, OR (2009)	85%	233%	67%
Kalamazoo, MI (2013)	-	232%	-
Burlington, VT (2012)	97%	176%	99%

³ No searches of Hispanics or Asians were conducted in 2011-12.

West Virginia (2009)	99%	168%	56%
North Carolina (2000-2011)	92%	139%	-
Illinois (2008)	95%	125%	80%
Lansing, MI (2005-2006)	94%	119%	55%
Texas (2011)	149%	115%	33%

The difficulty of estimating stop rates is due to the lack of precise population data. Seguíno, Brooks, and Mitofsky (2012) recommended the collection and use of accident data as a more accurate measure of the racial/ethnic composition of drivers. That data would only be available through state data bases, and is, as of yet, not accessible. We continue to recommend that such data be made available on an annual basis in order to better track trends in racial disparities in traffic stops, although it is recognized that the responsibility for that lies outside the control of the Burlington Police Department.

Once stopped, the data indicate racial disparities in officer treatment of drivers. Blacks and Hispanics continue to be more likely to receive citations and less likely to be given warnings than White or Asian drivers. Arrest rates of Blacks relative to Whites have fallen, but search rate disparities continue to be large. Moreover, in searches with probable cause, the hit rate for Blacks is lower than for Whites (as it was in 2011-12), lending support to the perception that police target Black drivers, whether implicitly or explicitly.

In sum, racial disparities have not substantially improved since 2009-10, and suggest the importance for Burlington Police Department to redouble its efforts to ensure equitable treatment of drivers. While change takes time, marginalized populations continue to be adversely affected by disproportionate policing. We reiterate here several recommendations made in our previous report. These include:

A. Community engagement, education, and diversity training

The BPD is encouraged to conduct an in-depth analysis of factors that may be contributing to disparate stop and search rates. Unraveling the factors behind disparities and using these findings as a bridge to community-police engagement is an important step. In particular, the BPD is encouraged to work to develop a mechanism for ongoing engagement with the community of color, in light of the dissolution of Uncommon Alliance.

B. Data Collection

We recommended several revisions to the data collection process in our earlier report and continue to suggest these be adopted. Of particular importance is the collection of accident data, which measures the *driving* population, avoiding the need to rely on Census/ACS population data. As noted above, area police departments have indicated

that these data can only be collected and made available at the state level. This suggests the need, then, to work with the state to make such data available and to avoid continued concerns about using Census data to measure the population.

References

Baumgartner, F. & D. Epp. (2012). *North Carolina Traffic Stop Statistics Analysis*. Accessed October 29, 2013. <http://www.unc.edu/~fbaum/papers/Baumgartner-Traffic-Stops-Statistics-1-Feb-2012.pdf>

Carter, D. & J. Schafer. (2006). *Lansing Police Department MATS Data Sixty Month Analysis*. Accessed November 6, 2013. <https://www.msu.edu/~kwakdaeh/cj335/LPD.pdf>

Hass, S., Turley, E., & M. Sterling. (2009). *West Virginia Traffic Stop Study: Final Report*. Accessed Monday 11, 2013. <https://www.msu.edu/~kwakdaeh/cj335/LPD.pdf>

Lamberth, J. (2013) *Traffic Stop Data Analysis Project The City of Kalamazoo Department of Public Safety*. Accessed November 10, 2013. <http://www.kalamazoocity.org/dmdocuments/KzooFinalReport82820131.pdf>

Polunsky, A. (2011). *2011 Traffic Stop Data Report: Texas Department of Public Safety*. Accessed November 9, 2013. http://www.txdps.state.tx.us/director_staff/public_information/2011_ANNUAL_TRAFFIC_STOP_DATA_REPORT.pdf

Seguino, S., N. Brooks, & K. Mitofsky. (2012). *Racial Disparities in Policing? An Assessment of 2009-10 Traffic Stop Data in Chittenden County, Vermont*. University of Vermont and Cornell University.

Sizer, R. & D. Saltzman. (2009). *Portland Police Bureau: Plan to Address Racial Profiling*. Accessed November 6, 2013. <http://www.portlandoregon.gov/police/article/230887>

Stout, M. (2011). *Racial and Ethnic Disparities in Traffic Stops and Stop Outcomes: Springfield, Missouri*. Accessed October 29, 2013. <http://www.springfieldmo.gov/spd/pdfs/racialDisparityTrafficStopRpt2011.pdf>

Weiss, A. & D. Rosenbaum. (2008). *Illinois Traffic Stops Statistics Study 2008 Annual Report*. Accessed November 6, 2013. <http://www.dot.il.gov/travelstats/ITSS%202008%20Annual%20Report.pdf>

Appendix

Table A.1 Raw data on traffic stops, 2011-12

	Whites	Blacks	Hispanics	Asians	Other/ Unknown	Total
Total Incidents	5033	396	40	195	27	5691
Outcome						
<i>Arrest for violation</i>	56	5	0	2	0	63
<i>Arrest for warrant</i>	7	0	0	0	0	7
<i>Ticket</i>	1242	130	12	45	0	1429
<i>Warning</i>	3726	261	28	148	0	4163
Search						
<i>No Search Conducted</i>	4991	387	40	195	27	5640
<i>Search Conducted</i>	43	9	0	0	0	52
<i>Search with probable cause</i>	29	7	n/a	n/a	n/a	36
Contraband found	23	4	n/a	n/a	n/a	27
No contraband found	6	3	n/a	n/a	n/a	9
<i>Search with reasonable suspicion</i>	8	2	n/a	n/a	n/a	10
Contraband found	3	1	n/a	n/a	n/a	4
No contraband found	5	1	n/a	n/a	n/a	6
<i>Search with warrant</i>	5	0	0	0	0	5

Note: N/A indicates not applicable.

Source: Burlington Police Department, November 2013.