VSP Racial Disparities Analysis, 2010-15

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Focus of analysis

- The analysis concentrates on traffic stops and outcomes that are the result of officer discretion.
- We therefore ignore:
  - externally generated stops
  - arrests with warrant
- We calculate search rates in 2 ways:
  - Probable cause and reasonable suspicion only
  - All searches (incl. searches on warrant).

Multiple outcomes

- We have made sure to count only one stop per driver (even if there are multiple outcomes per stop).

Five indicators

1. **Stop rates** compared to share of the population
2. Share of stops that lead to:
   - **Warning vs. ticket (citation)**
   - **Arrest**
   - **Search**
3. Percentage of searches with **contraband**
4. **Trooper disparities** in stop rates
5. Racial disparities by barracks

Table 1. Stops and Stop Rates by Race/Ethnicity, 2010-15

Year	White	Black	Asian	Hispanic
Total number of stops	259,903	5,554	3,562	2,568
Share of stops	95.6%	2.0%	1.3%	0.9%
Share of population	95.1%	1.6%	1.8%	NA

- Population is from US Census for 2010-14.
- We do not use accident data to estimate the driving population because 22% of VSP reported accidents are missing race of driver.

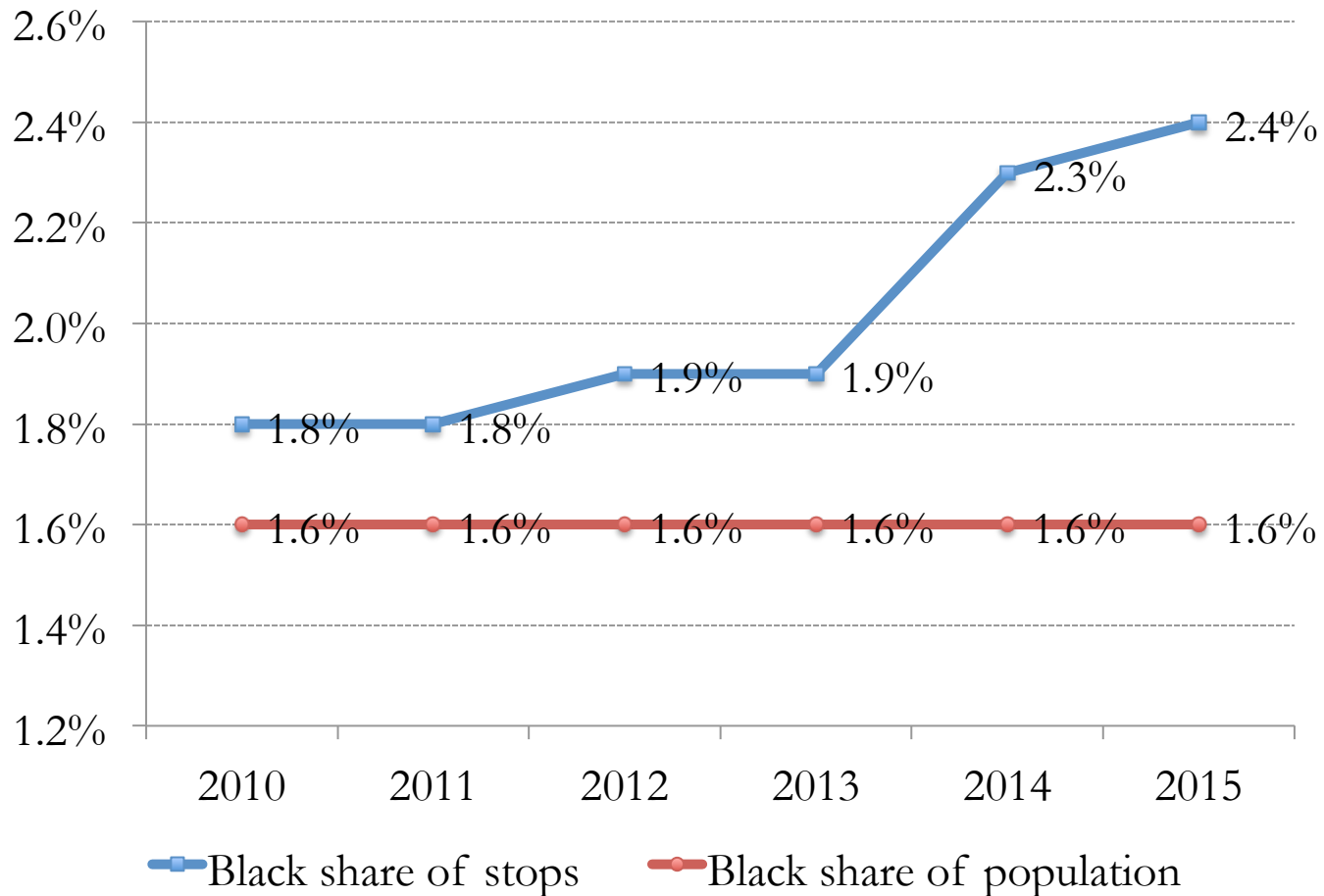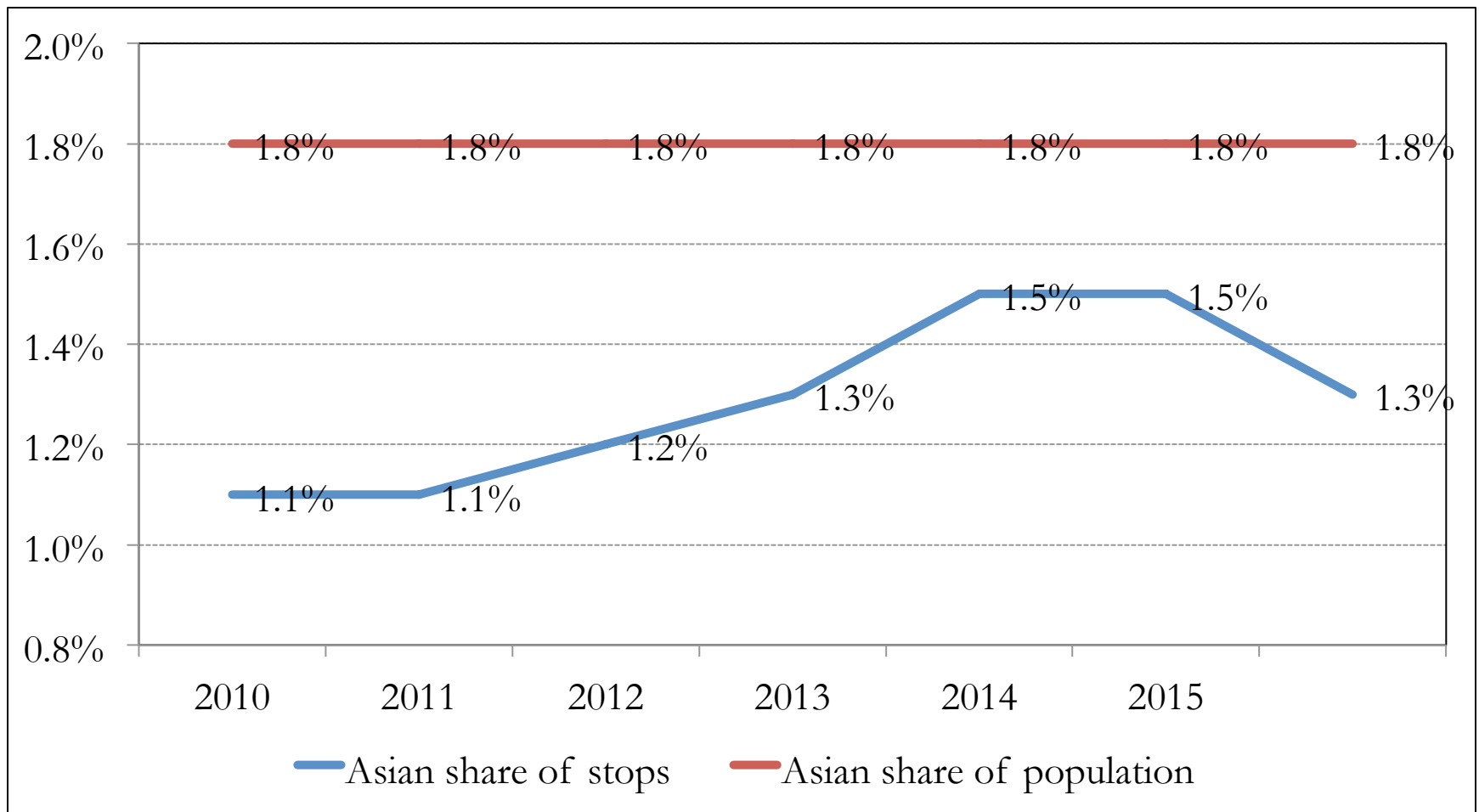Figure 1A. Trends in black stop rates and share of population, 2010-2015

Figure 1B. Trends in Asian share of stops and population

Table 1. Summary of Outcome Rates by Race, 2010-15

|	White	Black	Asian	Hispanic
Ticket Rate	36.9%	42.3%	48.1%	44.6%
Warning Rate	61.5%	55.0%	51.0%	53.3%
Arrest Rate	1.0%	1.9%	0.6%	1.5%
Search Rate	1.0%	4.6%	0.8%	4.0%
Hit Rate (excl. warnings)	64.0%	47.0%	75.0%	42.2%
Hit Rate (all outcomes)	79.5%	66.8%	78.6%	65.7%

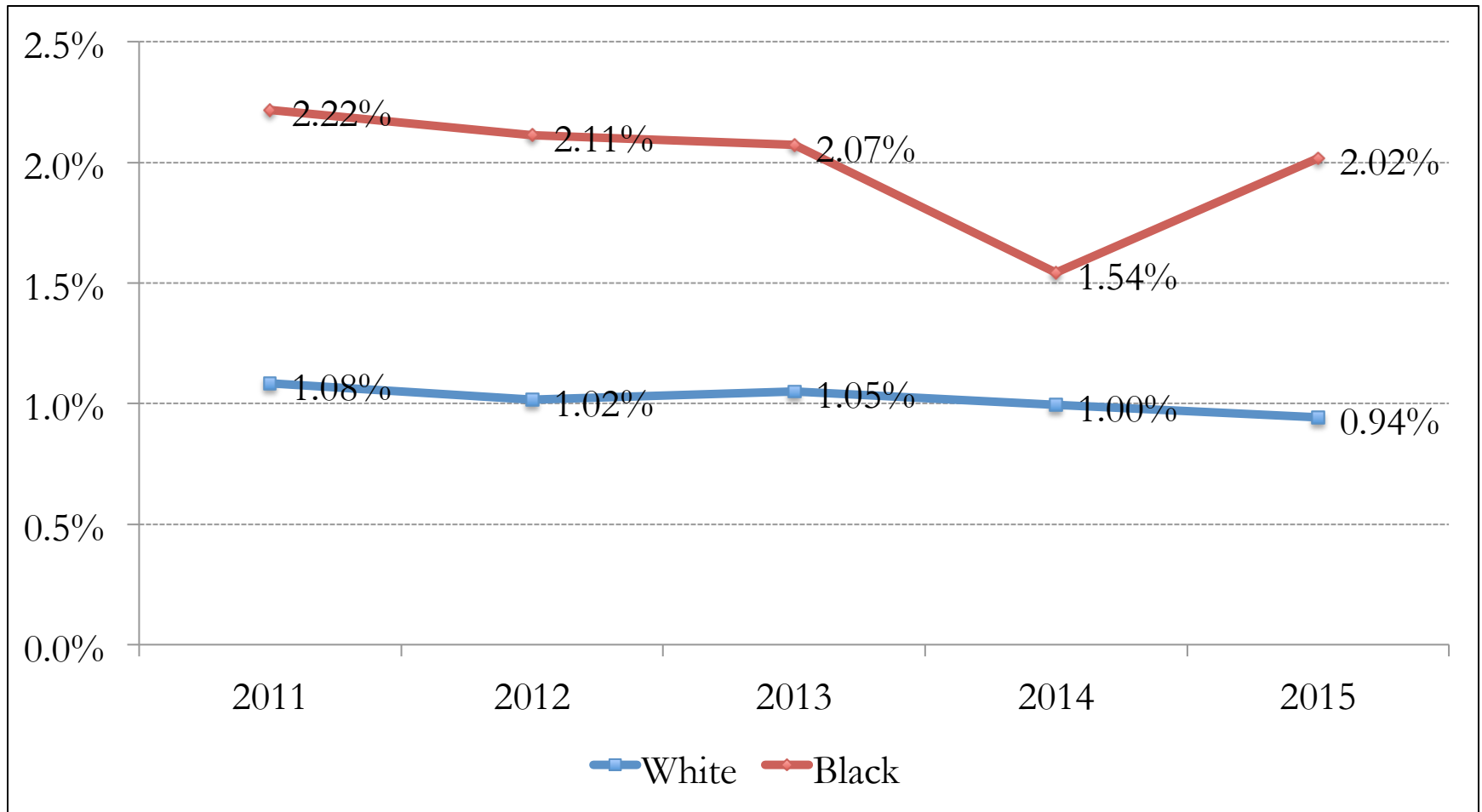*Excludes externally generated stops.

Table 4. Data quality
Number of Incident Reports with Missing/ Unknown Data, 2010-15

Year	Total Incidents	Age	Race	Sex	Reason for Stop	Outcome	Search	Search Outcome
2010	23,980	0.3%	2.3%	0.5%	1.0%	1.0%	1.0%	1.1%
2011	47,598	0.4%	1.6%	0.7%	0.9%	1.0%	1.0%	1.1%
2012	51,522	0.2%	2.3%	0.5%	0.6%	0.6%	0.6%	1.1%
2013	55,969	0.2%	1.4%	0.7%	0.9%	0.9%	0.9%	1.0%
2014	53,391	0.3%	1.1%	0.6%	1.0%	1.0%	1.0%	1.2%
2015	44,426	1.0%	2.0%	0.5%	0.4%	0.5%	0.4%	0.6%
Grand Total	276,886	0.4%	1.7%	0.6%	0.8%	0.8%	0.8%	1.0%

Figure 2. Trends in black and white ticket rates, 2011-15

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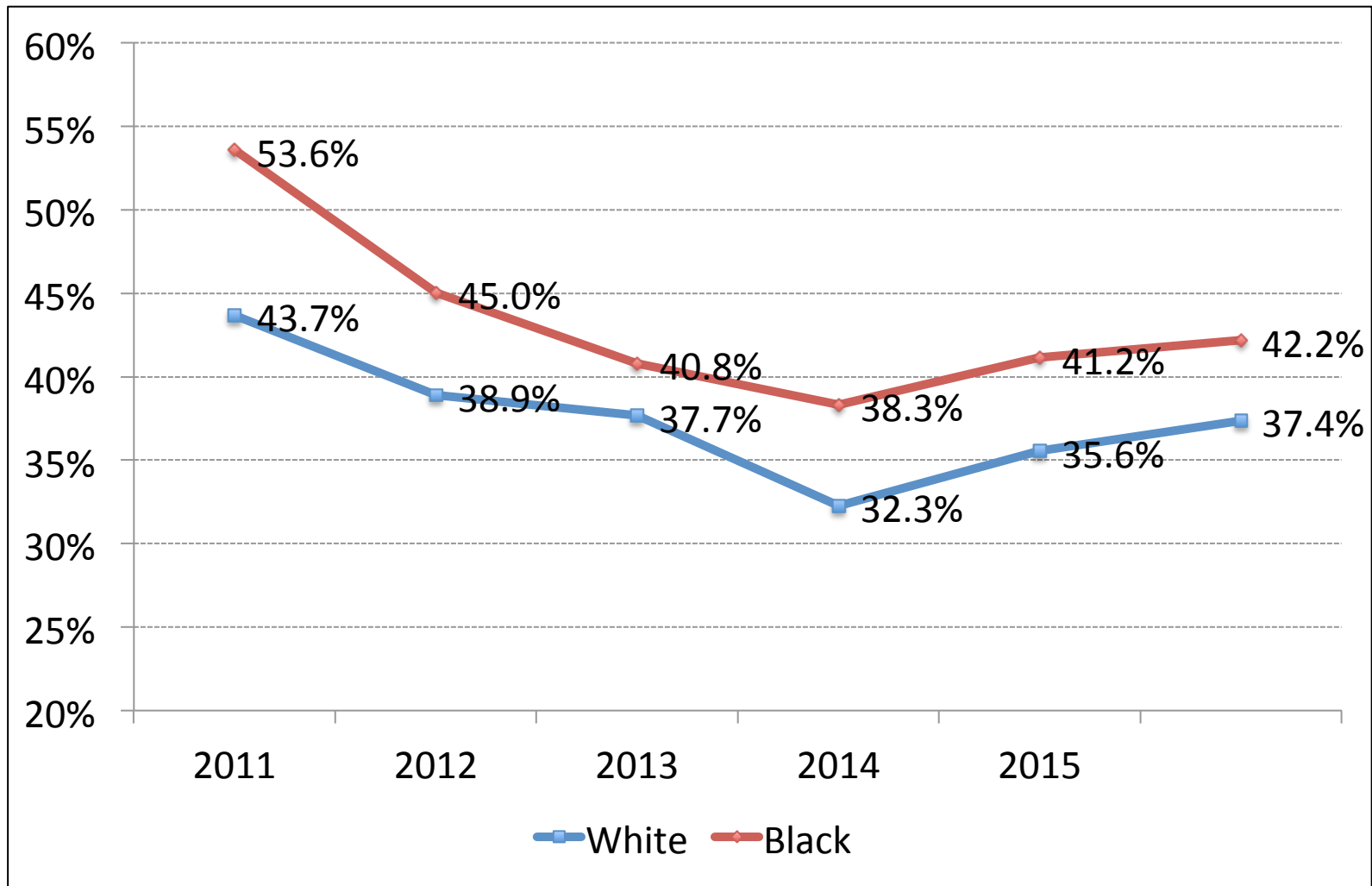
Figure 3. Trends in black and white arrest rates, 2011-15

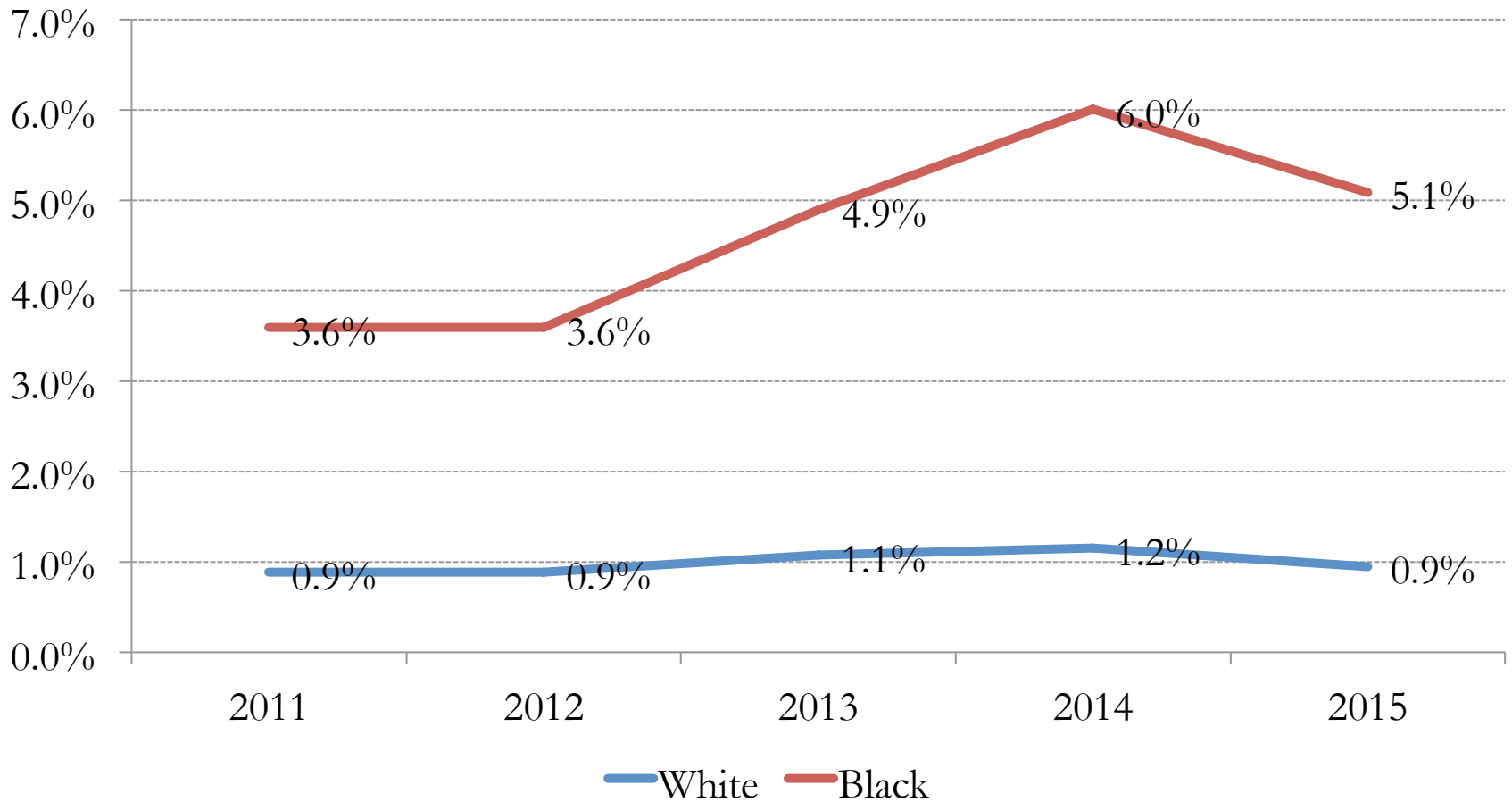# Figure 4. Trends in Black and White Search Rates, 2011-15

White ——— Black ———

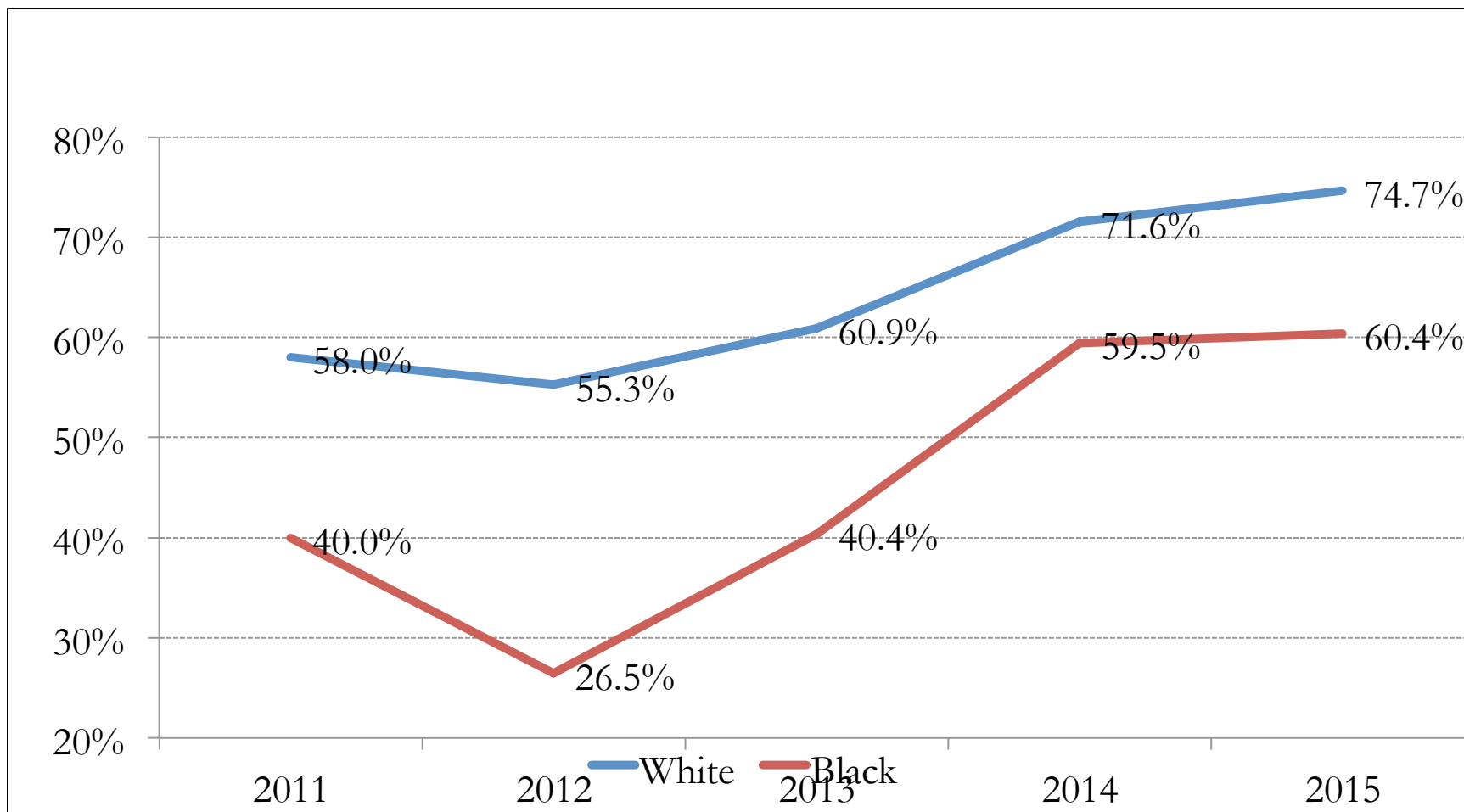# Figure 5. Trends in percentages of consent searches yielding contraband, 2011-15
(excludes warnings)

White — Black

58.0%   55.3%   60.9%   71.6%   74.7%
40.0%   26.5%   40.4%   59.5%   60.4%

2011   2012   2013   2014   2015

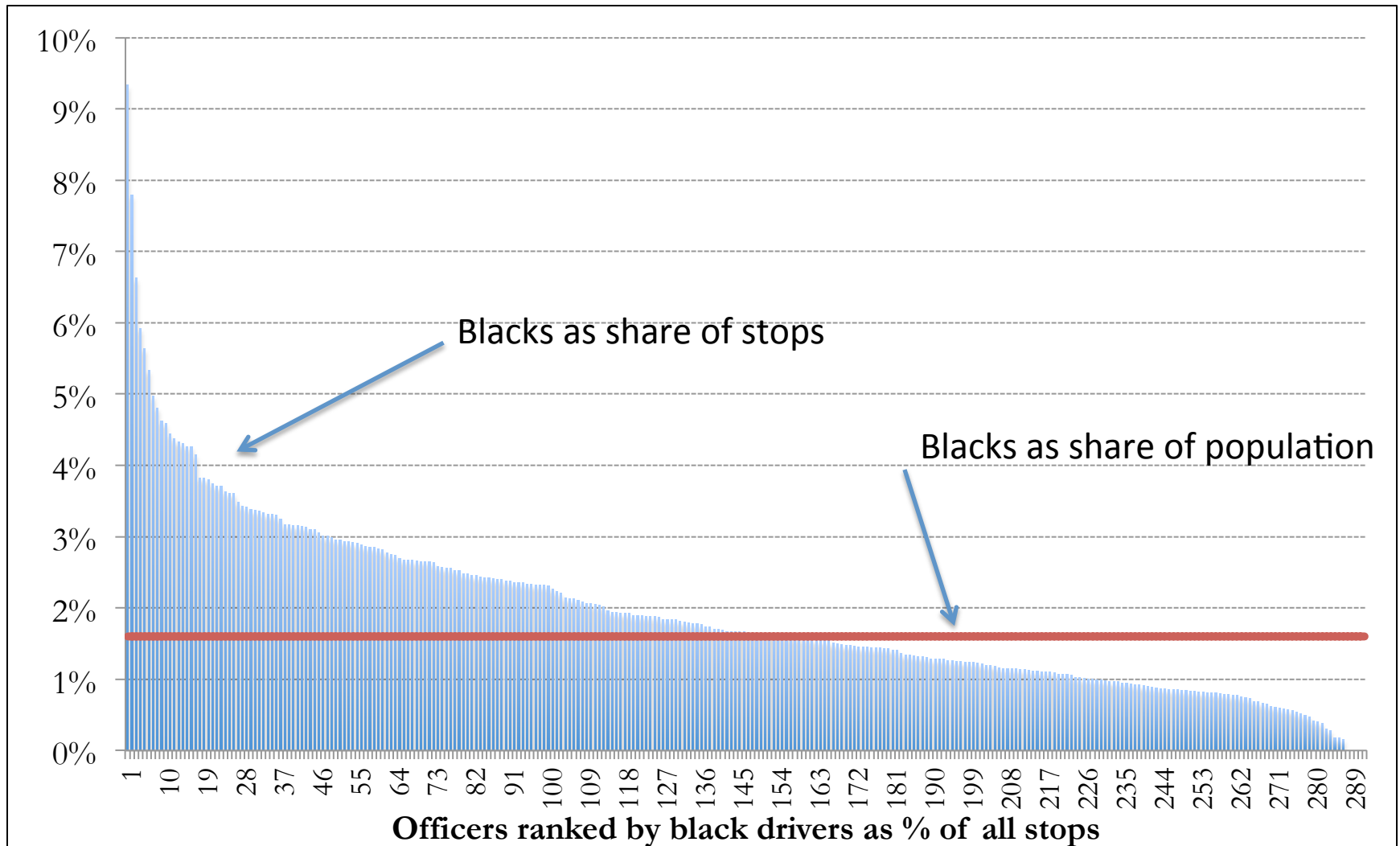# Figure 6. Blacks as % of stops by trooper, 2010-2015, (excludes externally generated stops), 100+ stops

Figure 7. Hispanics as % of trooper stops, 2010-2015, (excludes externally generated stops), 100+ stops
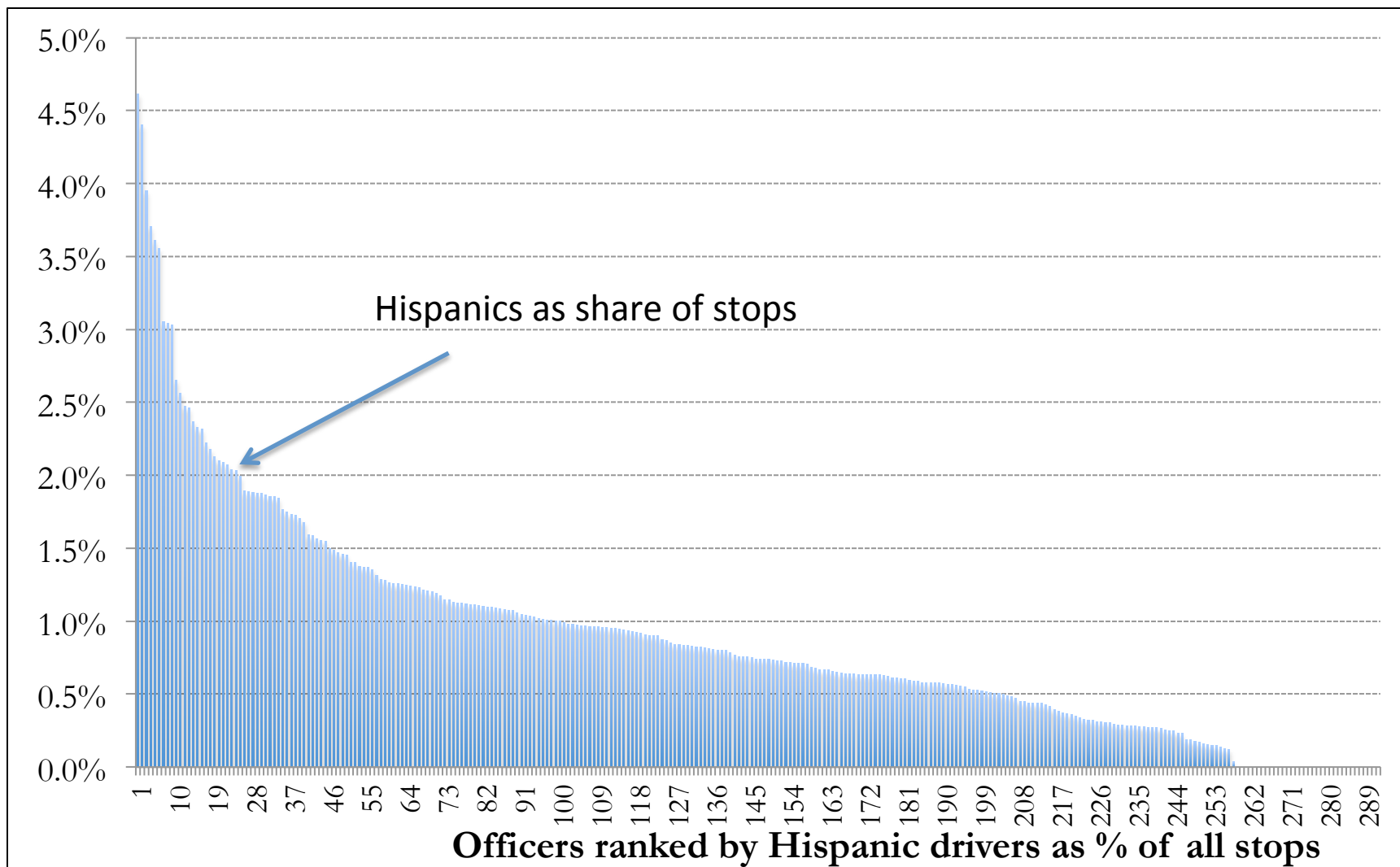
Figure 14. Percentage of stops with race as unknown or missing, by trooper
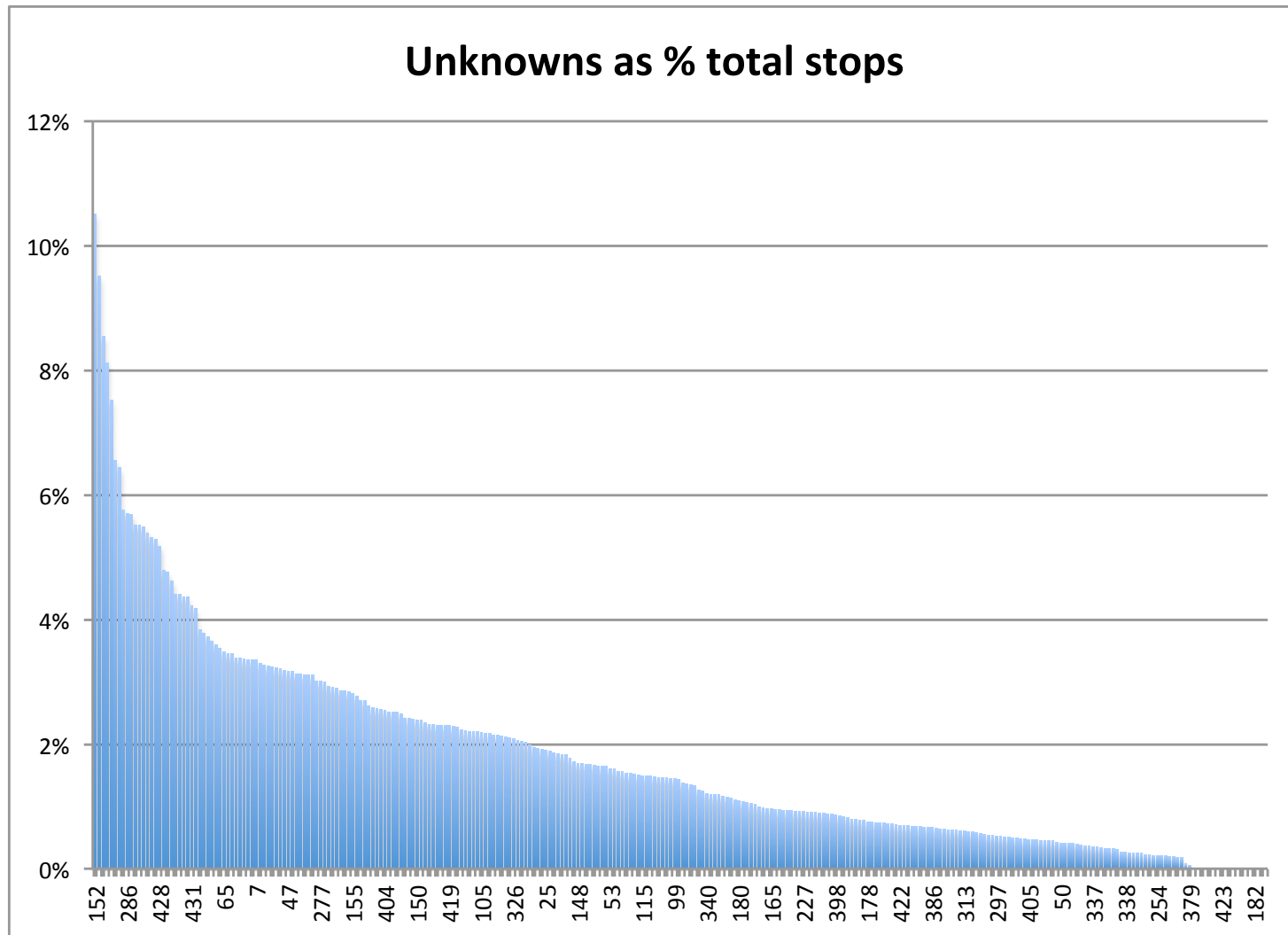

Unknowns as % total stops

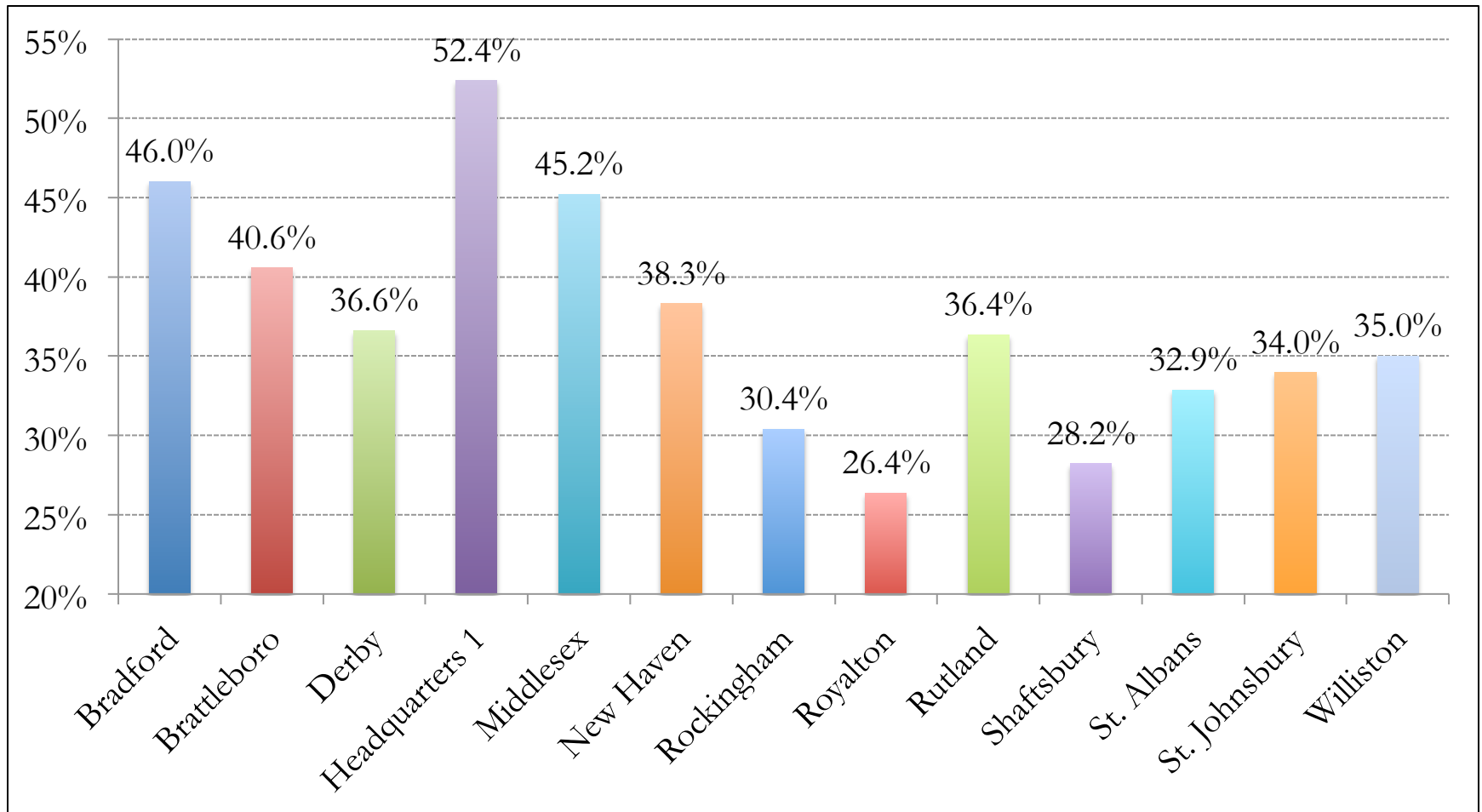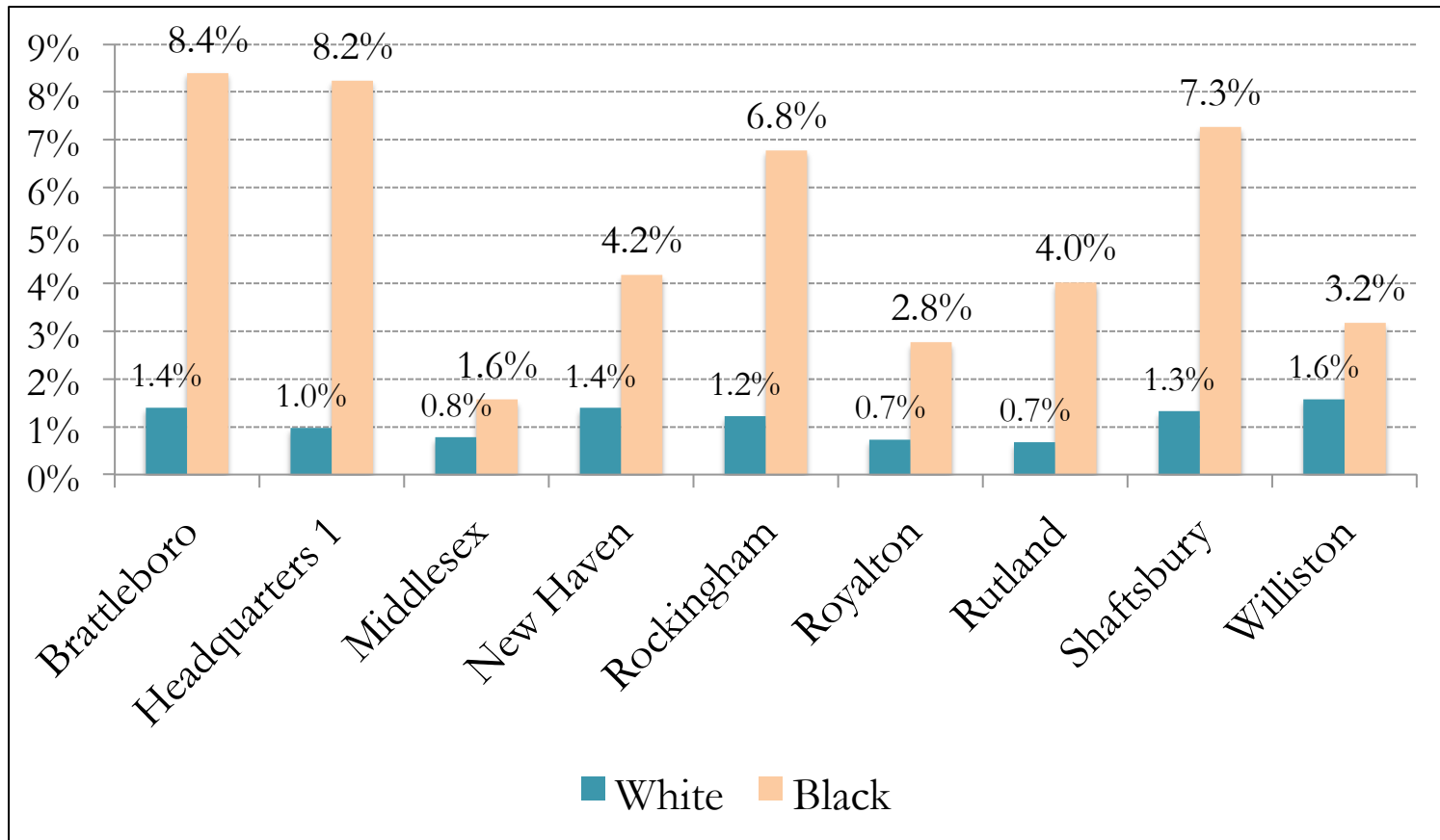Figure 9. Ticket rates by barracks, 2010-15

Figure 10. White and black search rates by agency, 2010-15

- Only barracks with 10+ searches of black drivers shown here.

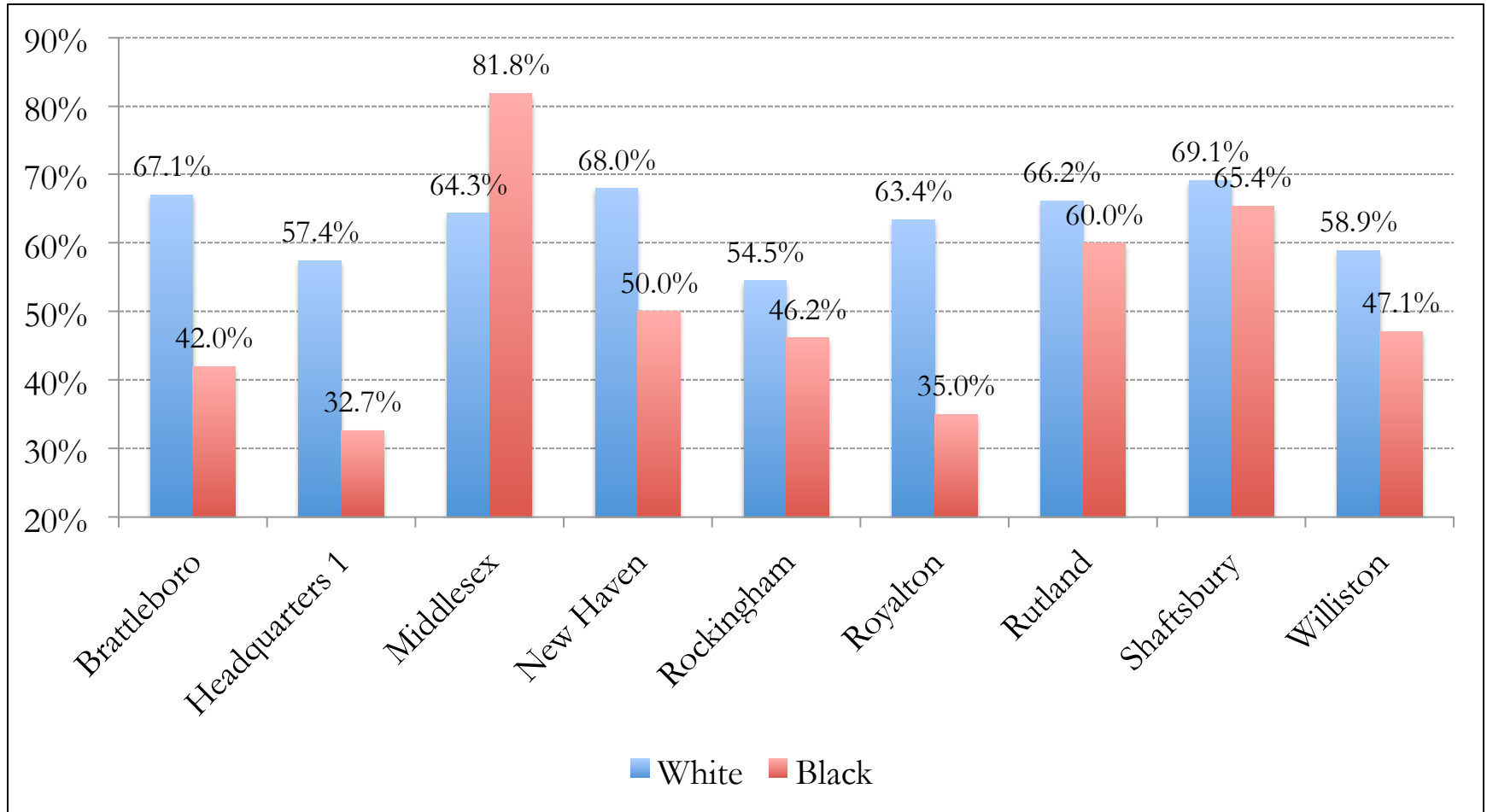Figure 11. Hit rates on consent searches by barracks, 2010-15

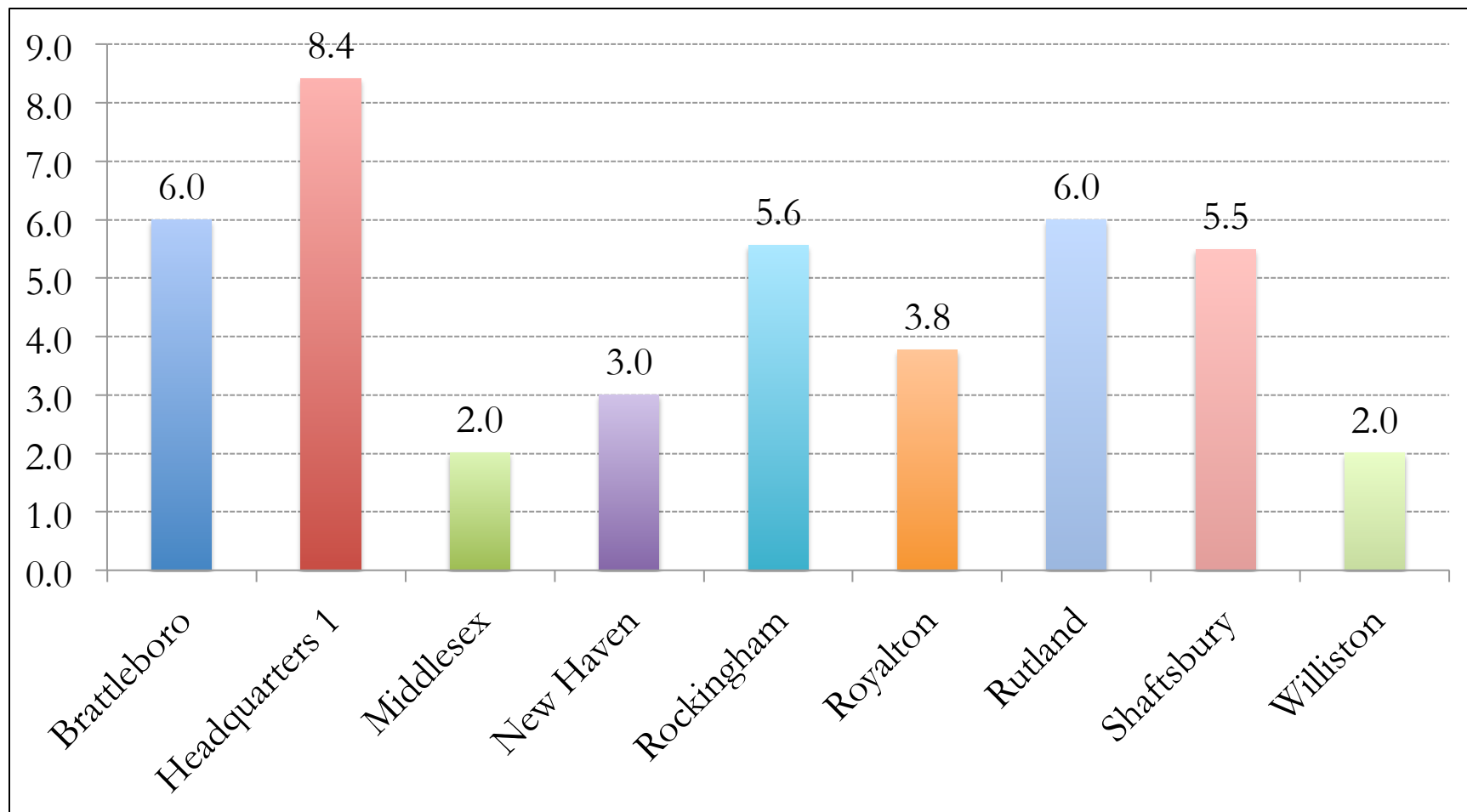Figure 12. Ratio of black/white search rates

Table 4. Statistically Significant Racial Disparities in Outcomes

	Black-white	Asian-white	Hispanic-white
Ticket rate	Yes	Yes	Yes
Arrest rate	Yes	No	Yes
Search rate	Yes	No	Yes
Hit rate	Yes	No	Yes

Differences between Seguino/Brooks and McDevitt Studies

Where our methods are the same, the two studies produce similar results. However, our methods differ in several ways.

1. Our study evaluates trends over time.
2. We disaggregate by race for *all* indicators, thereby highlighting disparities among minorities. We do not report on Native Americans due to small sample size.
3. We exclude externally generated stops.
4. We calculate hit rates in cases where a ticket or arrest occurs (excluding warnings).
5. We use U.S. census bureau data for driving population estimates due to poor quality of accident data.
6. We provide the raw data on which our analysis is based.

Continued

- Where McDevitt uses Census data, his are for 2010, while ours are for 2010-14.
- Our results on ticket rates are very similar, and differences likely due to our exclusion of externally generated stops (EGS).
- Our search rate of blacks is lower likely again due to our exclusion of EGS.
- There are differences in hit rates in the two studies (both overall and by barracks), likely due to our exclusion of EGS, as well as our calculation of hit rate that includes and excludes warnings. The latter, we argue, is the more salient. Our study shows wider gaps in hit rates, suggestive of inefficient policing and bias.