INFRASTRUCTURE, SAFETY,
AND ENVIRONMENT

Not Always Black and White: More Credible Approaches for Detecting Racial Profiling

Racial Profiling Is a Growing Concern

- I-95 "turnpike" studies in the mid-1990s raised public concern about racial profiling
  - Showed concrete evidence of racial profiling policies
- Public concern has led to state and local-level action
  - At least 14 states have passed legislation to deal with it
  - Many localities collect data voluntarily; some are compelled to do so by U.S. Justice Department
  - More than 400 police agencies now compile data on racial distribution of stopped motorists
- Congress is considering End of Racial Profiling Act
  - Mandates data collection to receive Federal funds

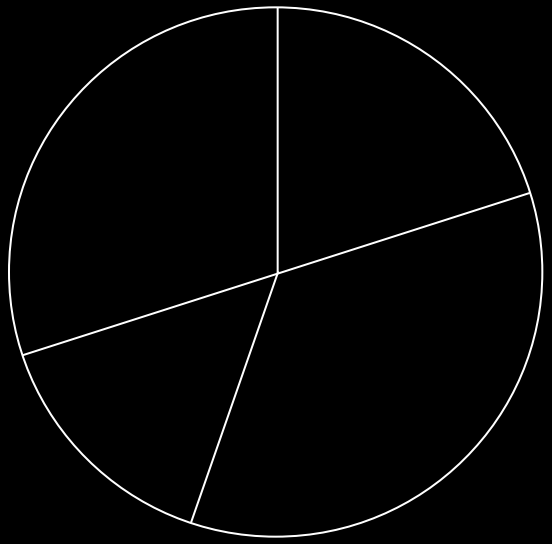
Unfortunately, the Quality of the Analysis Using Collected Data Is Weak

- A growing number of studies claim racial profiling based on analysis of data collected
  - **Texas**: Concluded that "75% of agencies stop more black and Latino drivers than white drivers"
- And some studies hastily conclude no profiling occurs based on analyzed data
  - **Sacramento**: Found that the percentage of black drivers stopped matched the percentage of blacks among crime suspect descriptions

Why Is Testing for Racial Profiling So Hard?

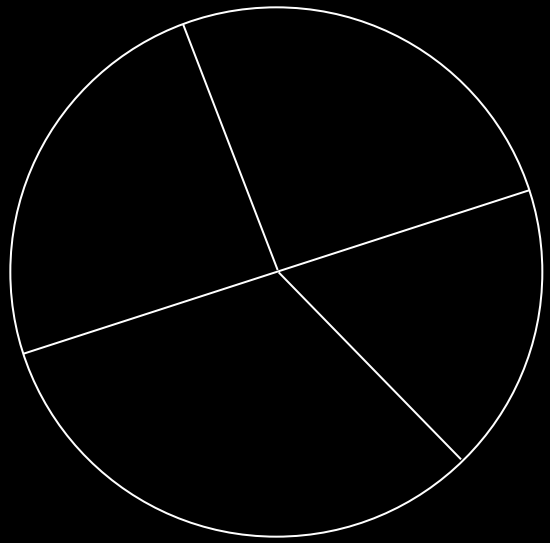
Racial Distribution of People Stopped

Difference Between



And

Racial Distribution of People at Risk of Being Stopped



= Racial Profiling

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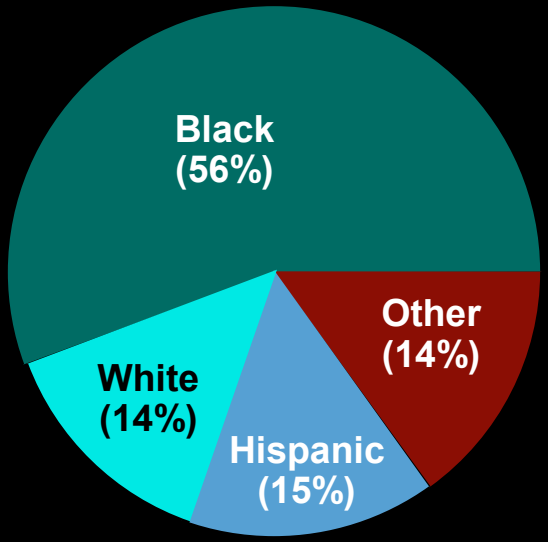

Racial Distribution of People at Risk of Being Stopped

Difference Between **And** **?** **=** **Racial Profiling**

Source: Oakland Police Department, 2003

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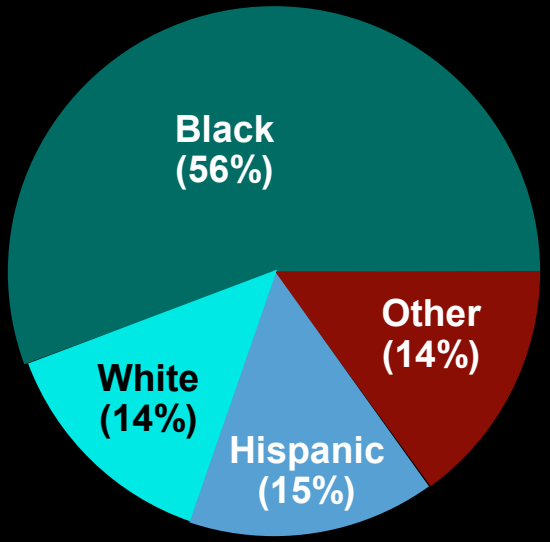

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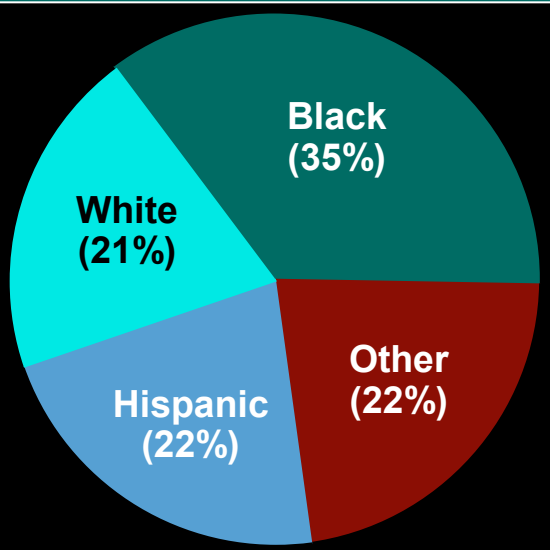
And

Racial Distribution of Residents According to the Census



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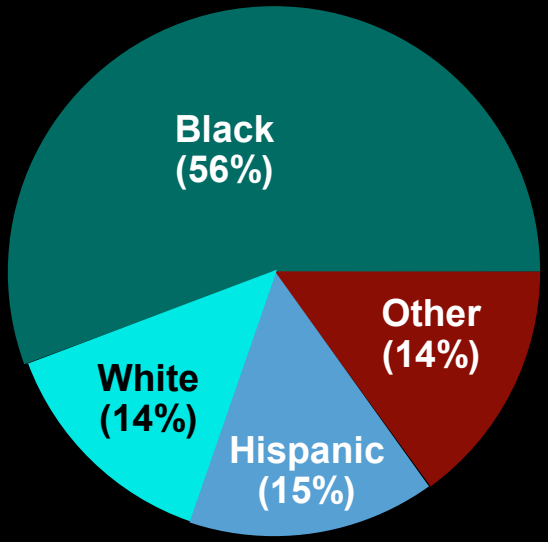

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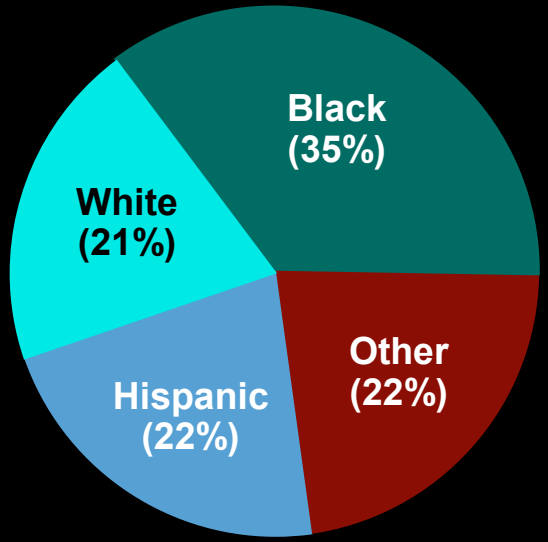

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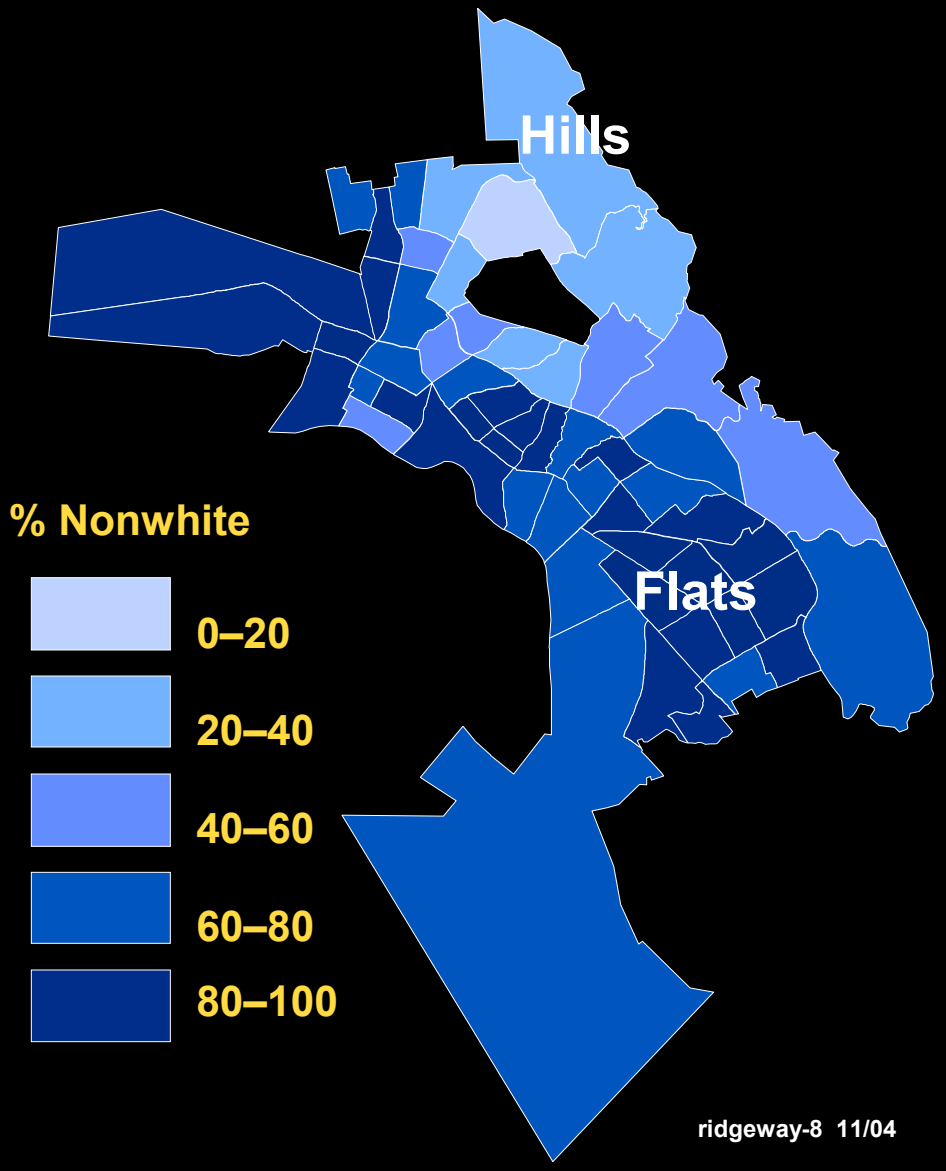
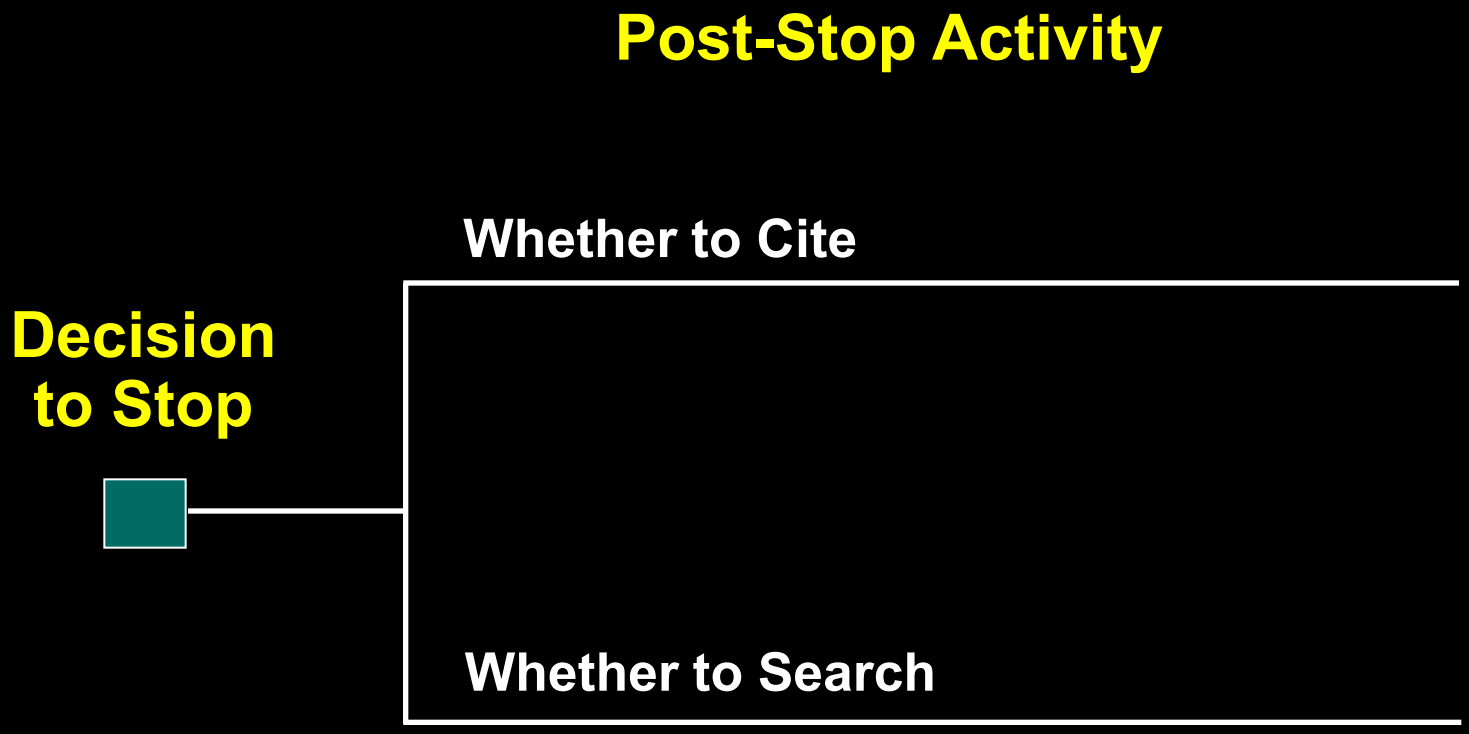
- The difference between the racial distributions may result from:
  - A race bias
  - Driving behavior: car ownership, time on the road, and care
  - Exposure to police

RAND Focused on Applying New Approaches to Assessing Racial Profiling

- Work on policy development and data collection with Oakland Police Department
- Assess whether there is racial profiling in the decision to stop
- Assess whether there is racial profiling in post-stop activity
- Use data from Oakland Police Department
  - 7,607 recorded vehicle stops
  - Between 6/15/03 and 12/30/03



Is There Racial Profiling in Oakland?



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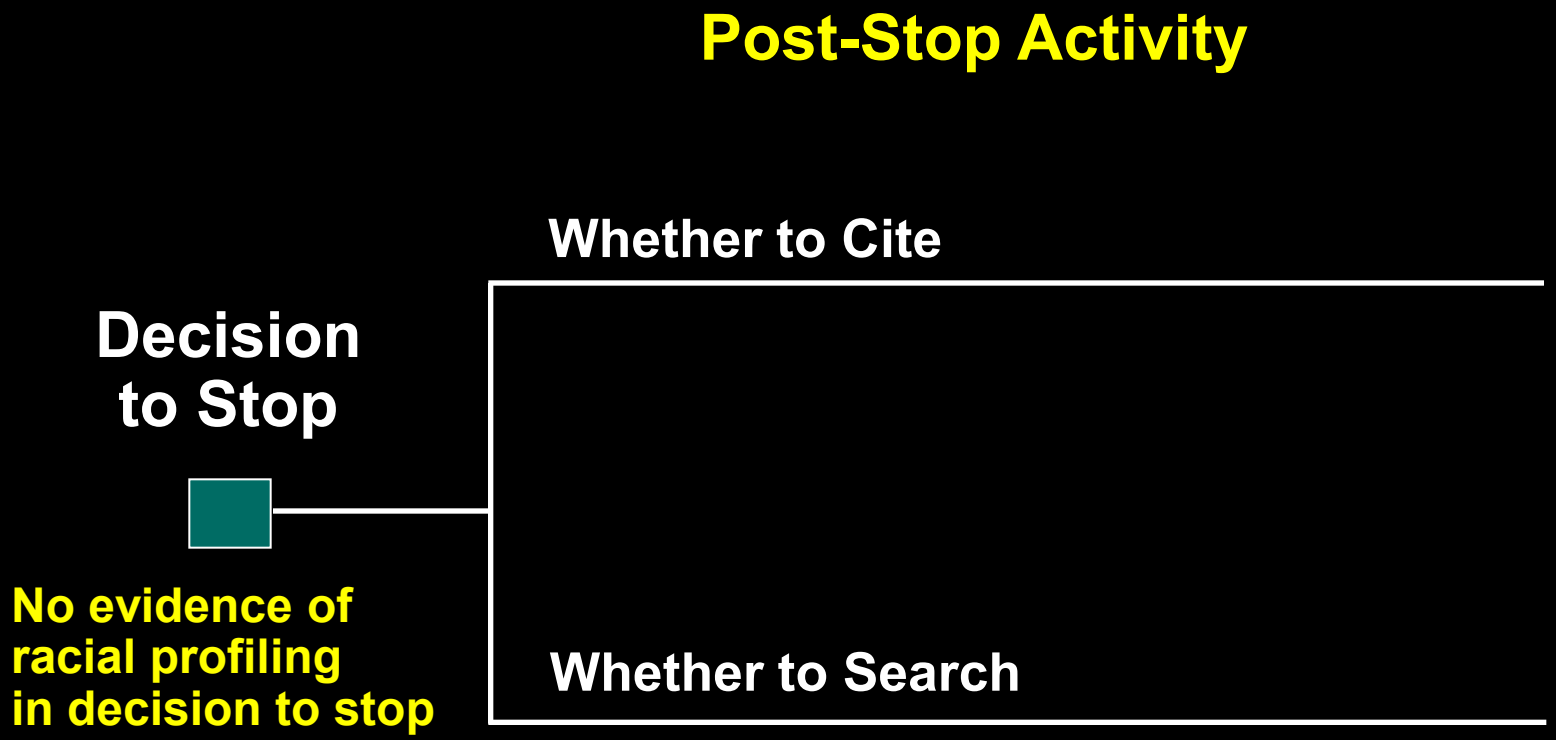
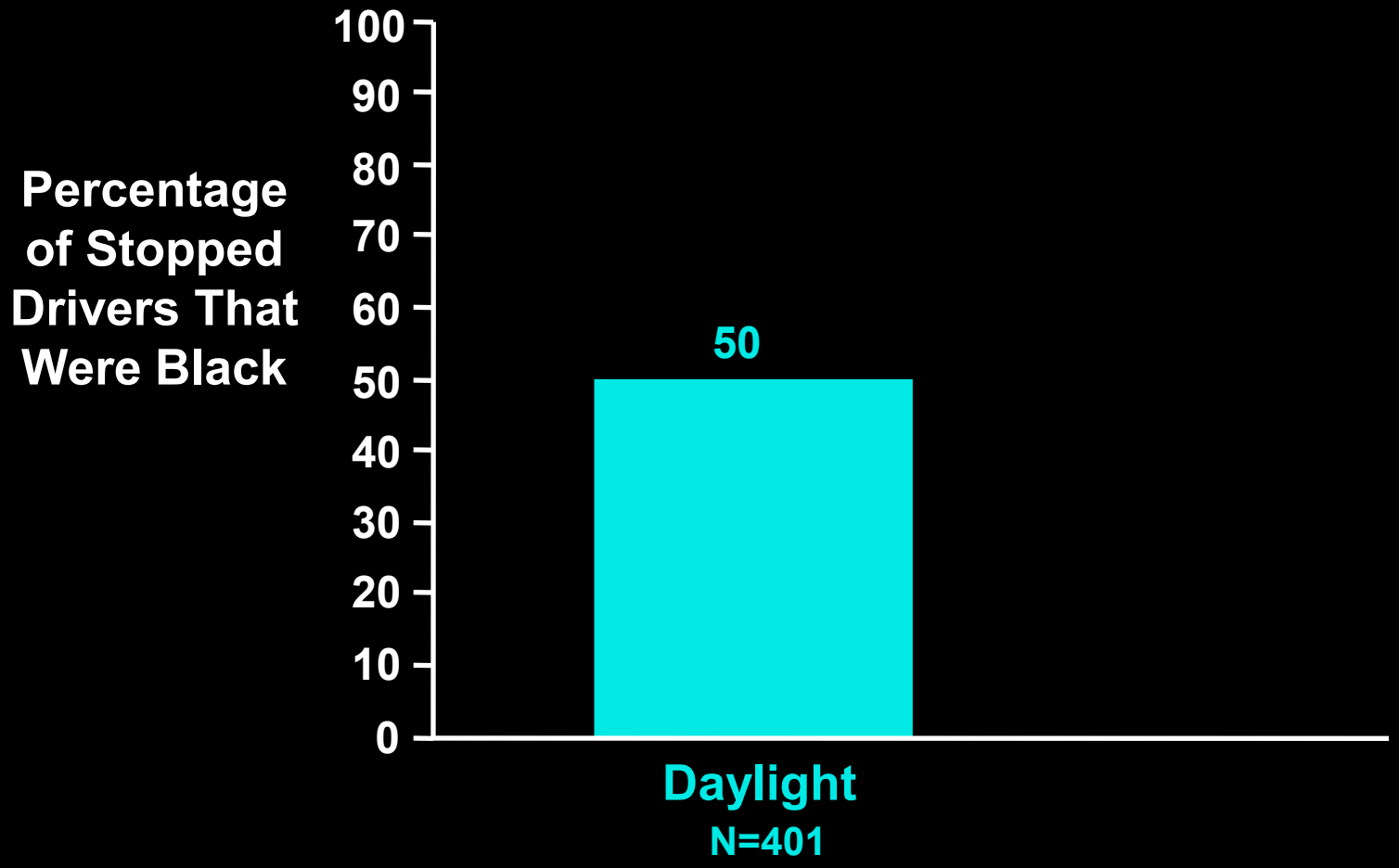


RAND's Approach Relies on Natural Lighting Experiment to Assess Racial Profiling

- **Does an officer's ability to identify race of driver in advance influence which drivers he stops?**
- **The ability to identify race in advance of the stop decreases as it becomes dark**
- **We directly test whether the ability to identify the race affects the race distribution of the stopped drivers**

Simple "Veil of Darkness" Test Shows No Evidence of Racial Bias in the Decision to Stop



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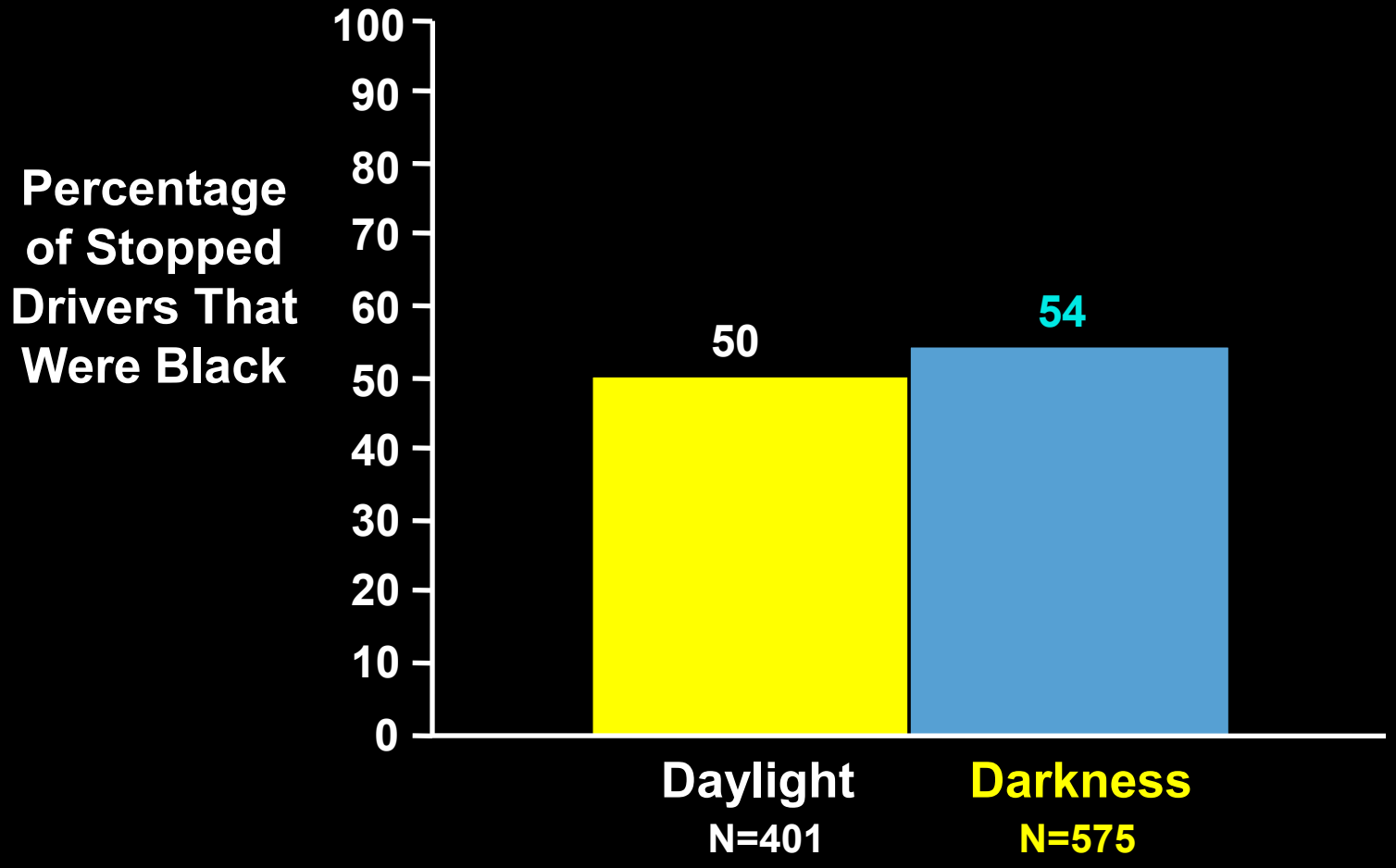
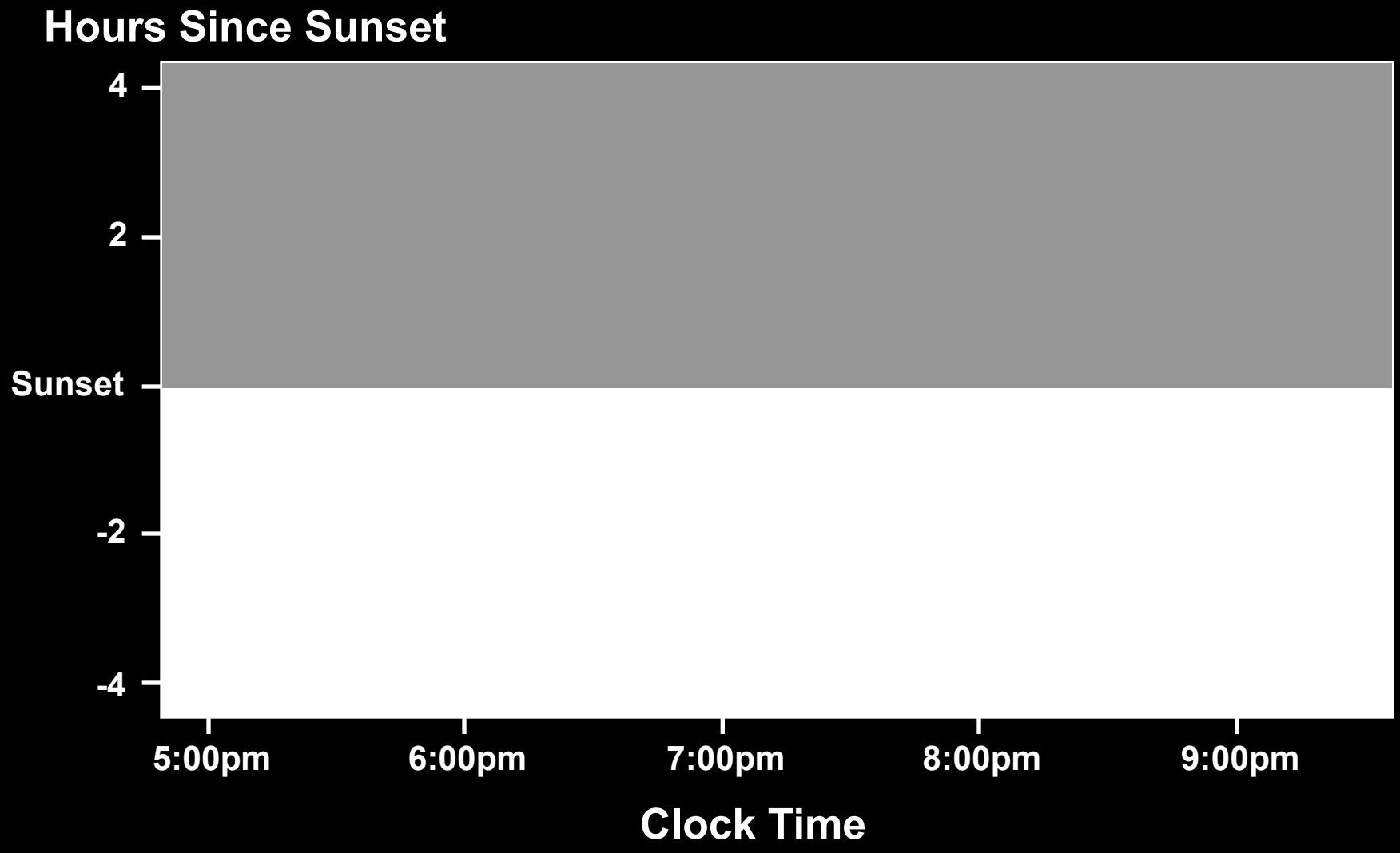
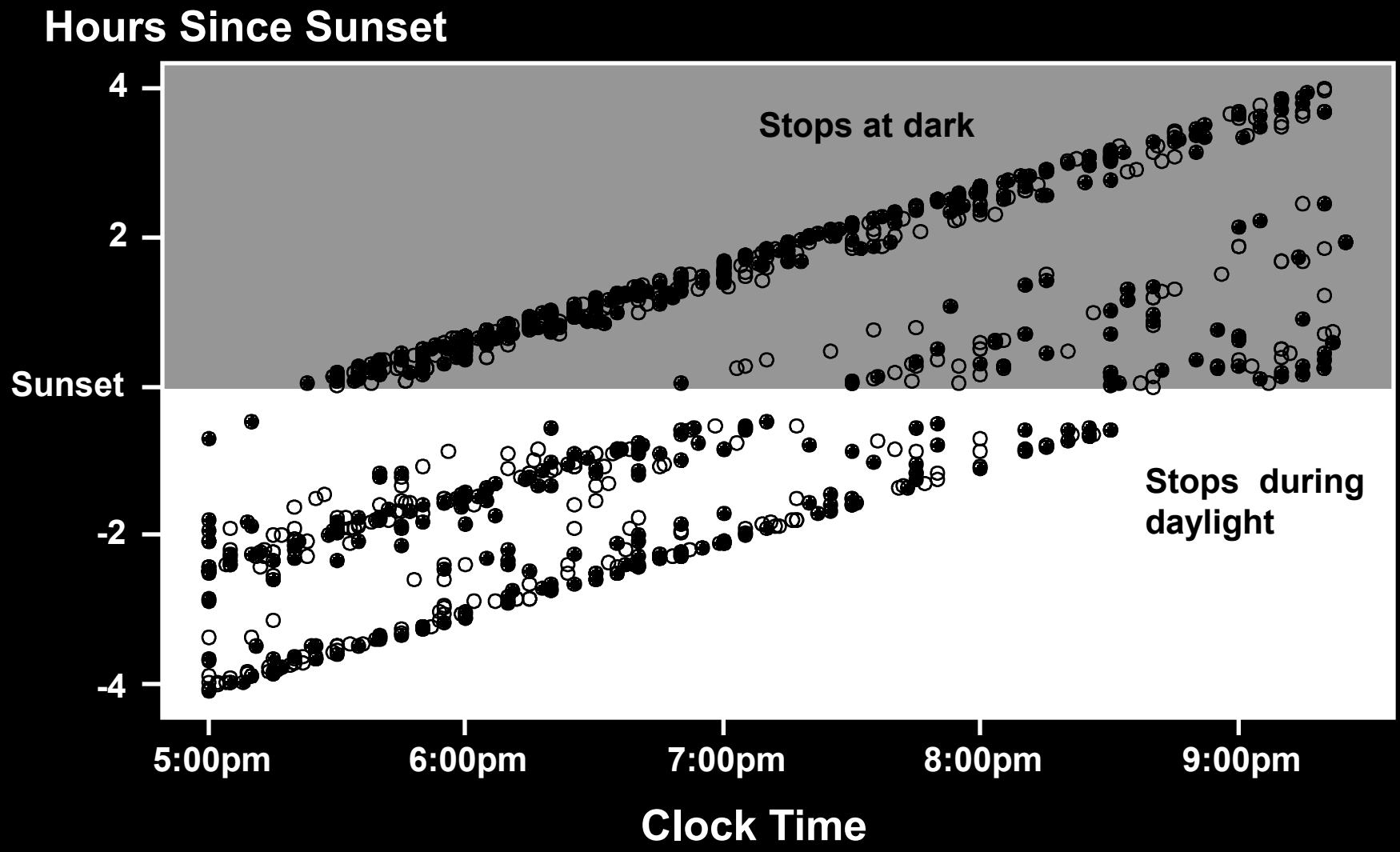


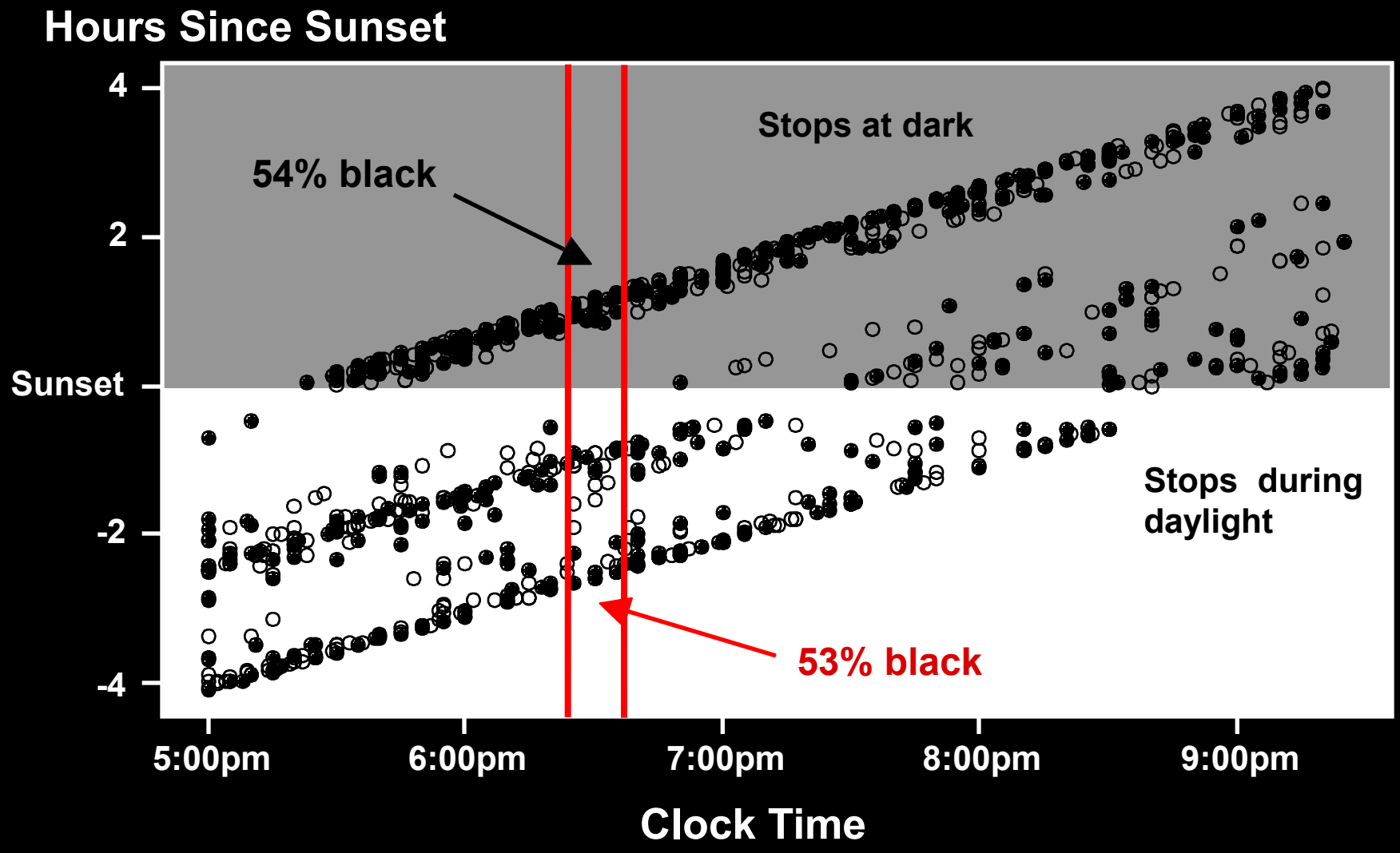
We Used a More Sophisticated Approach That Involved Adjusting for "Clock Time"



We Compare Stops During Daylight with Stops in Darkness



There Is No Difference in the Rate that Black Drivers Are Stopped



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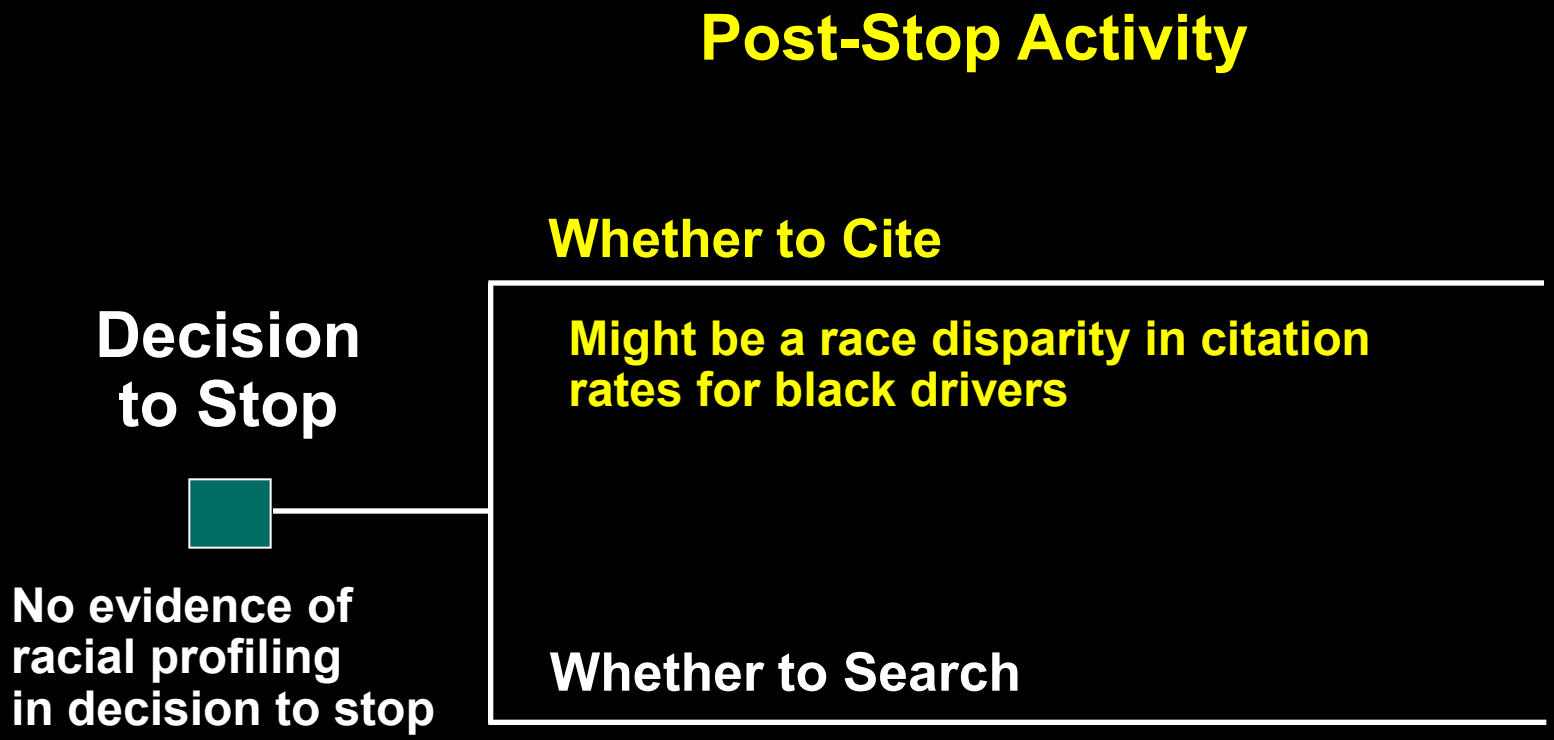

Propensity Score Analysis Created Comparison Group in Terms of Stop Features

Stop Feature	% Black Drivers (N=3,703)		% Nonblack Drivers (unmatched) (N=3,033)
Region			
East	32%		14%
Hills	1%		3%
⋮			
Time of Day			
12AM-4AM	16%		7%
⋮			
Age			
18-29	47%		38%
⋮			
Reason			
Mechanical/ Registration	26%		16%
⋮			

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Stop Feature	% Black Drivers (N=3,703)	% Nonblack Drivers (matched) (N=2,089)	% Nonblack Drivers (unmatched) (N=3,033)
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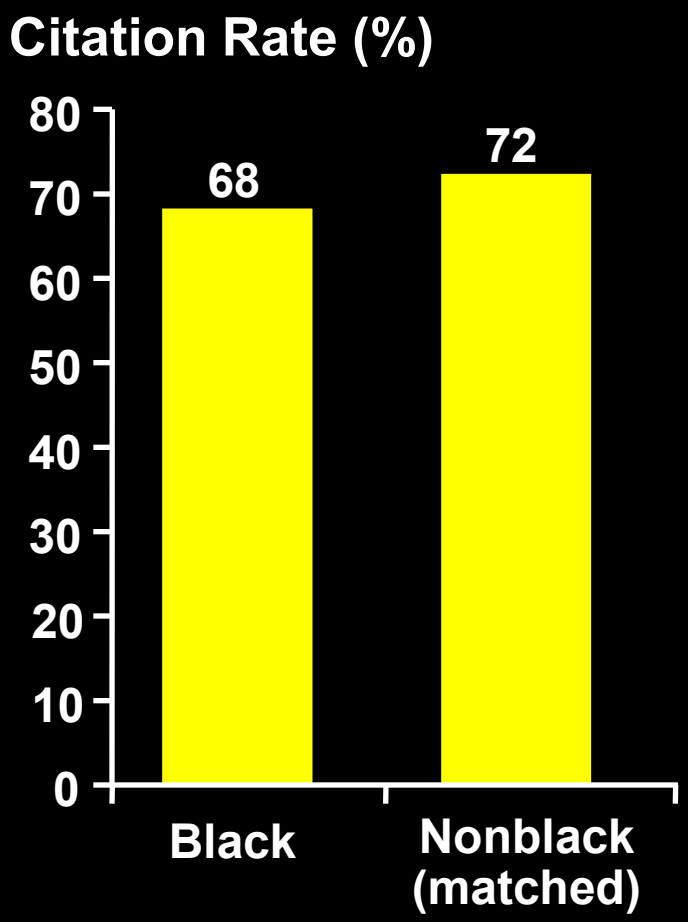
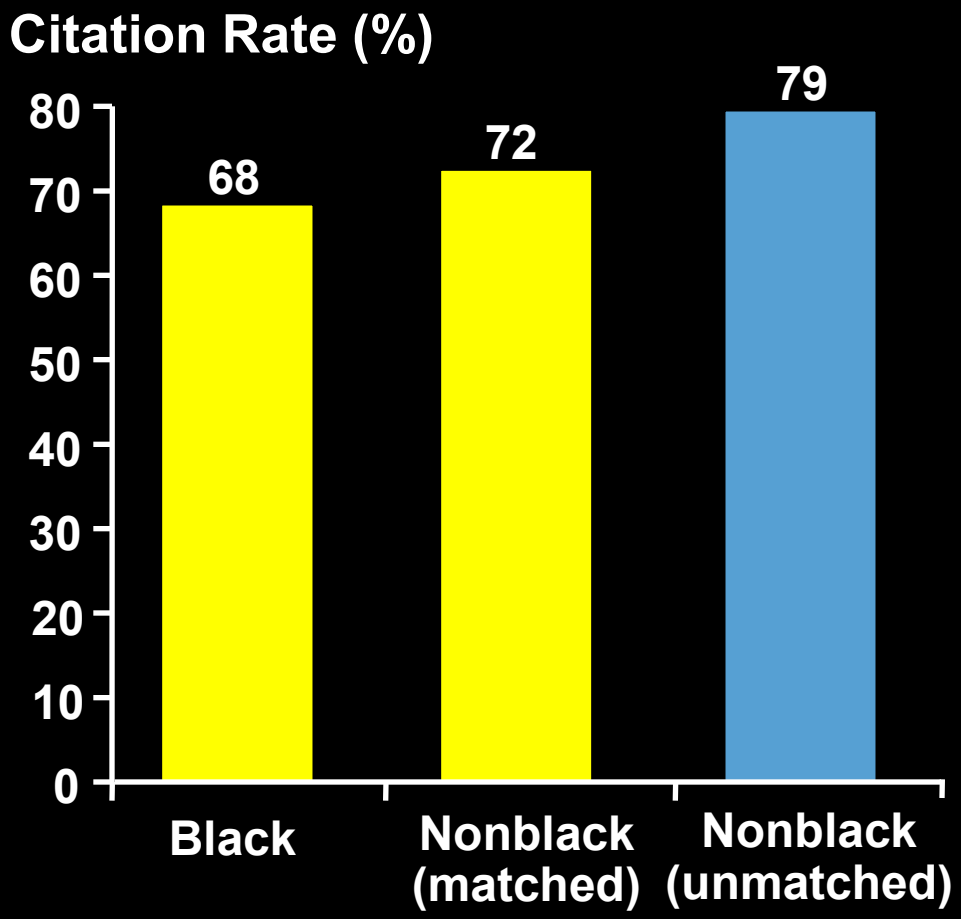
Age			
18-29	47%	45%	38%
⋮			
Reason			
Mechanical/ Registration	26%	23%	16%
⋮			

Analysis Shows That a Race Disparity in Citation Rates Might Exist



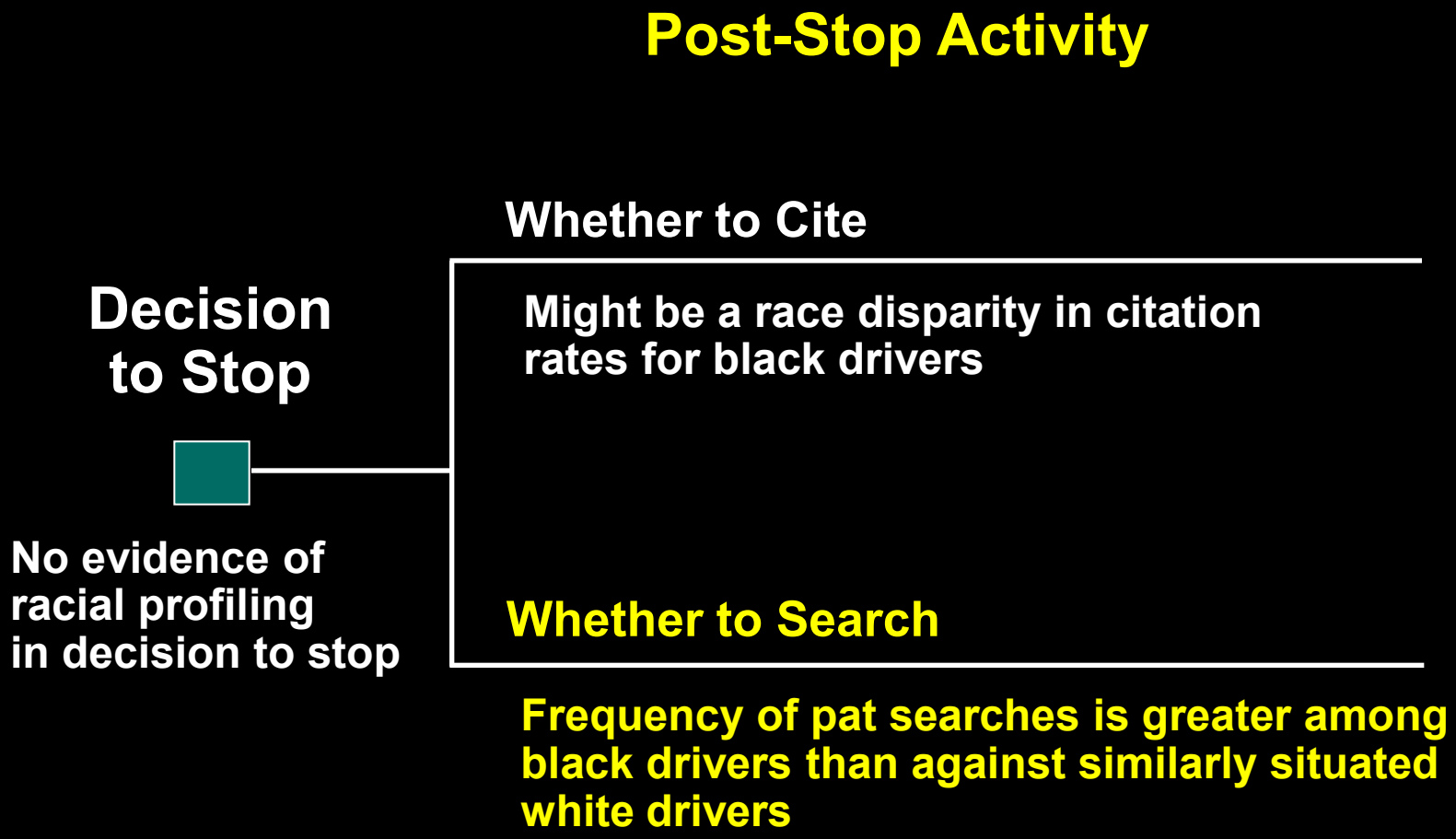
- Citation rate for black drivers is 4% less than for comparable non-black drivers
- Finding potentially implies that either
  - Police are slightly more hesitant to cite black drivers
  - Some of stops involving black drivers were of a level of severity unlikely to result in citation

But the Analysis Also Shows the Danger of Making Naïve Comparisons



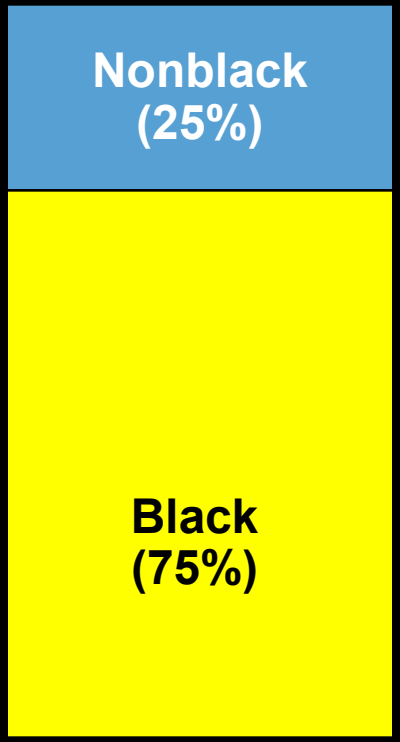
- When we compare black vs. nonblack (unmatched), difference is 11%
- Had we not adjusted for factors such as time and location of stop, we would have concluded that black drivers are *much* less likely to be cited than nonblack ones

Is There Racial Profiling in Oakland?

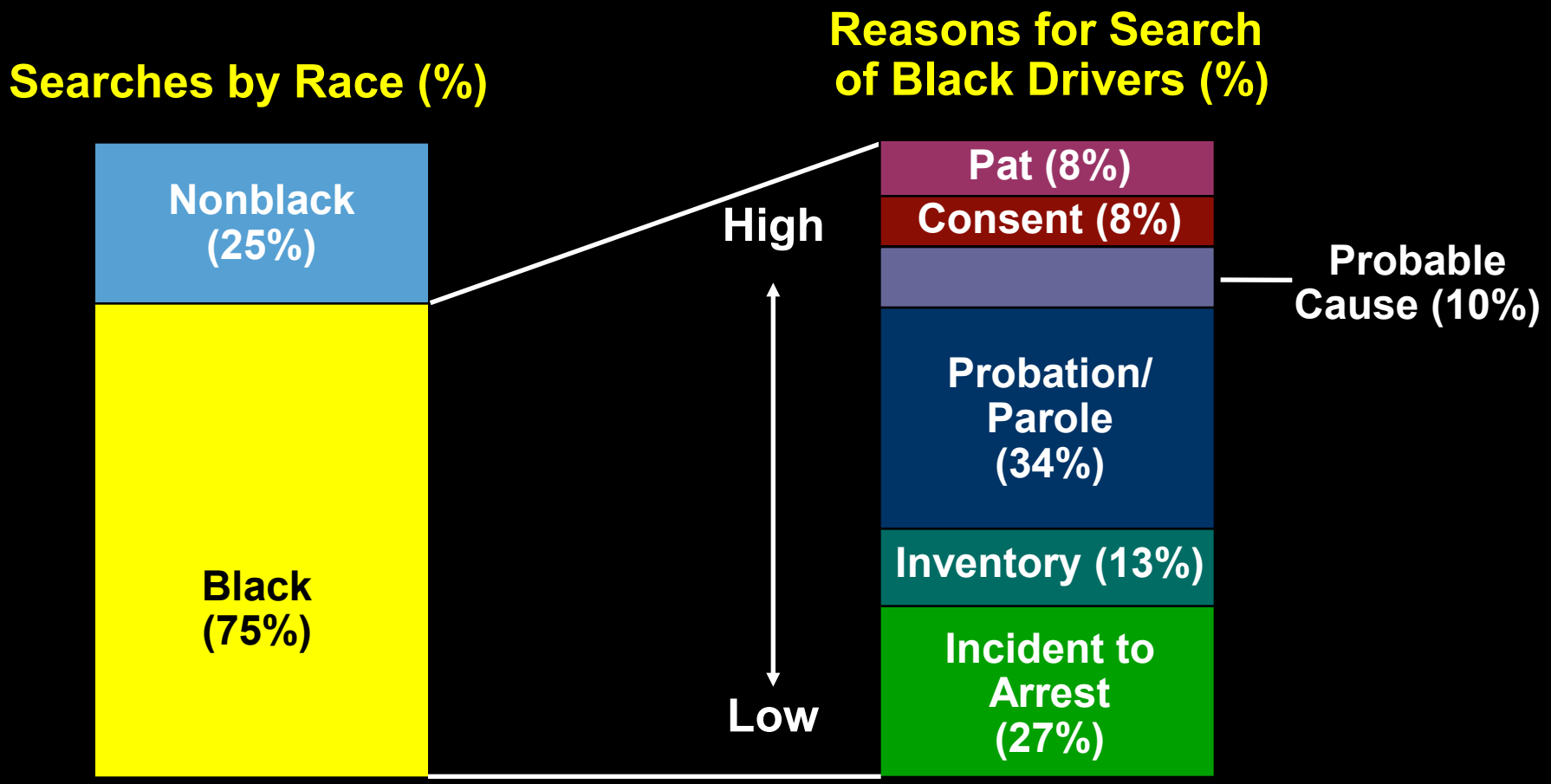


Black Drivers Bear the Burden of Searches

Searches by Race (%)



Black Drivers Bear the Burden of Searches
but Most Searches Are Low-Discretion Ones



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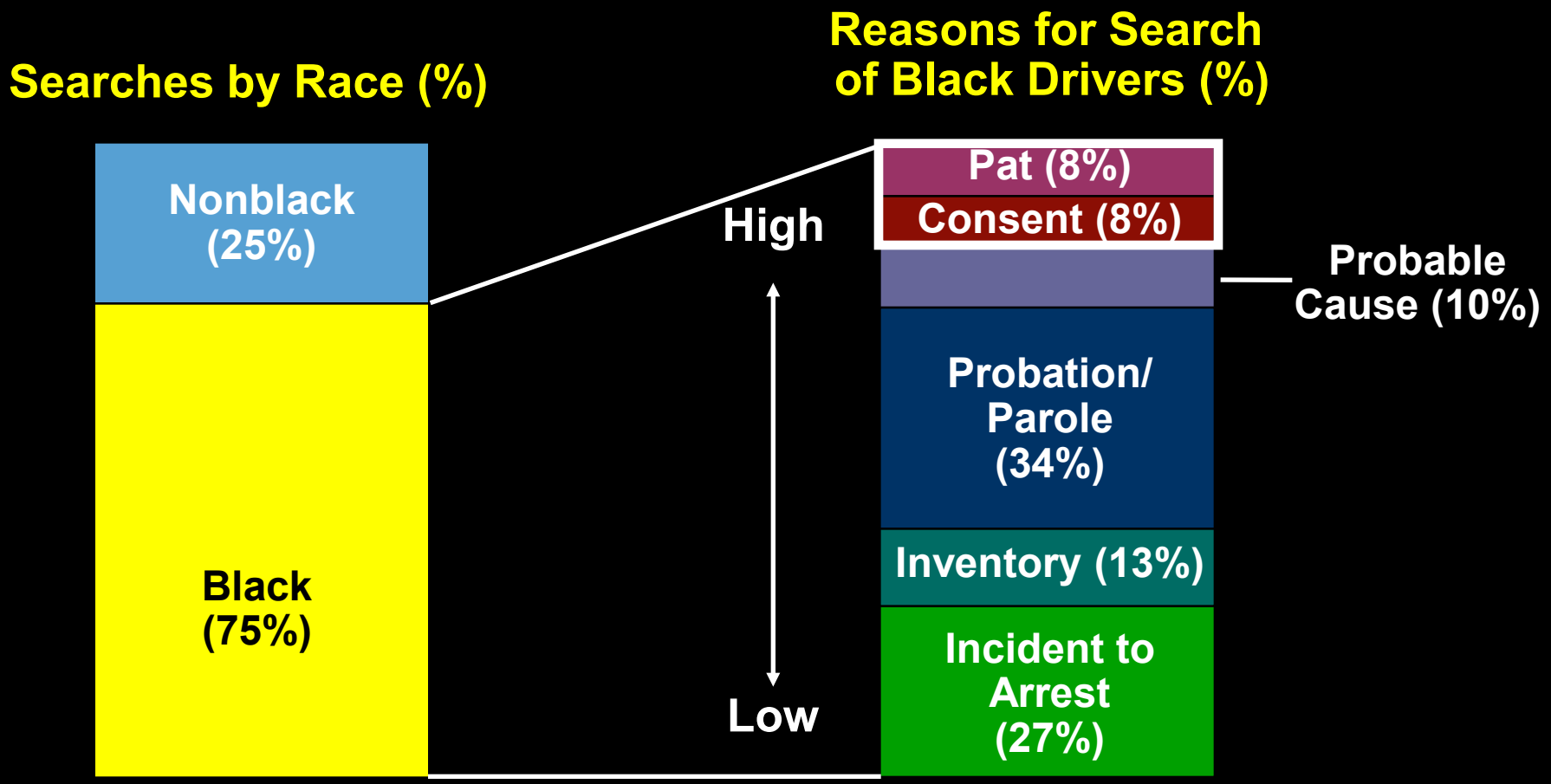
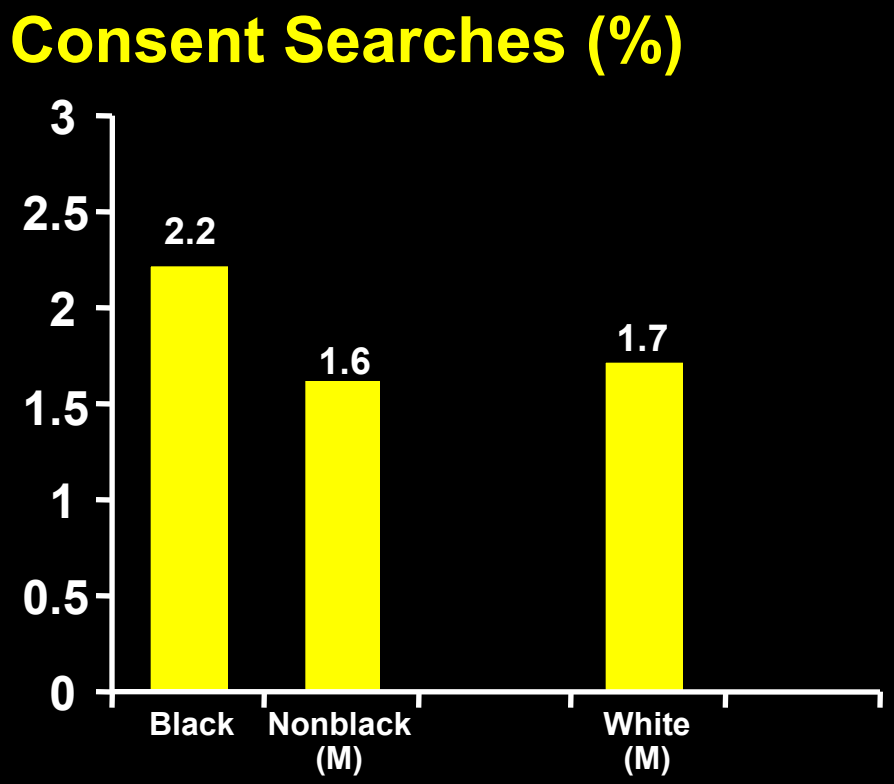


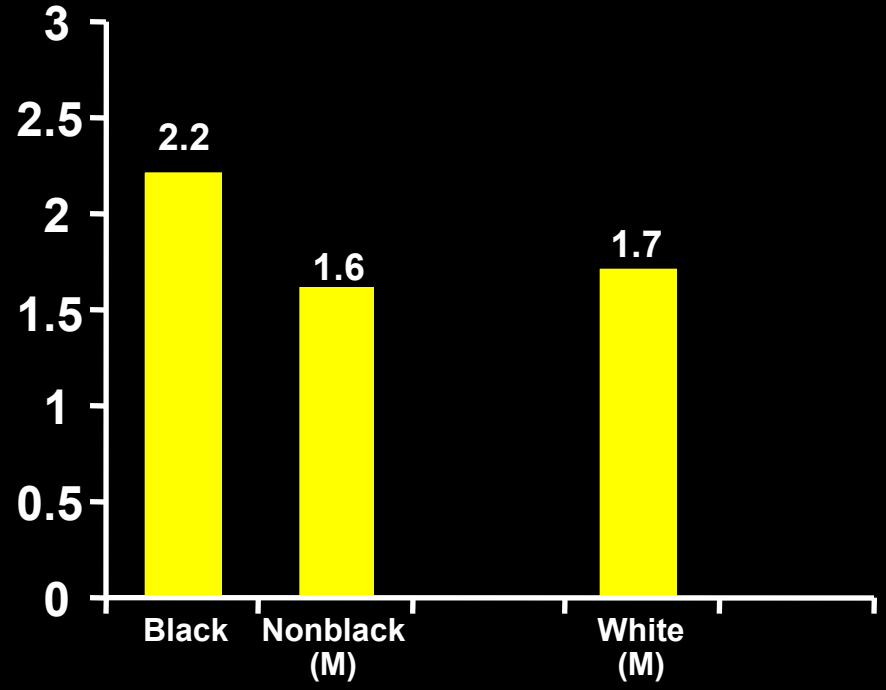
We focus on pat and consent searches

Consent Searches Have Similar Rates

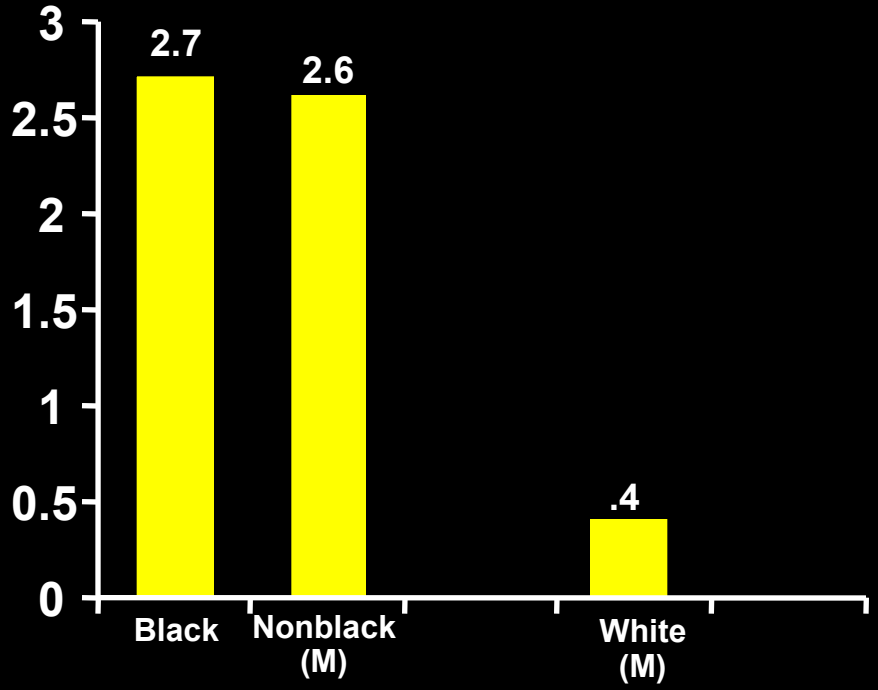


Consent Searches Have Similar Rates, but Pat Searches More Likely for Blacks Than Whites

Consent Searches (%)

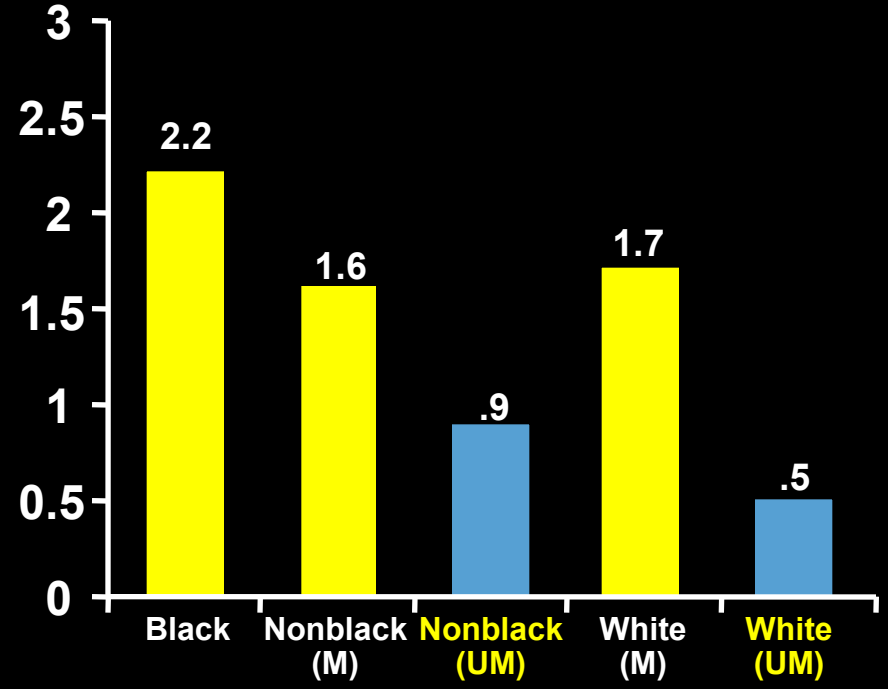


Pat Searches (%)



Once Again, Naïve Comparisons Can Distort the Findings

Consent Searches (%)



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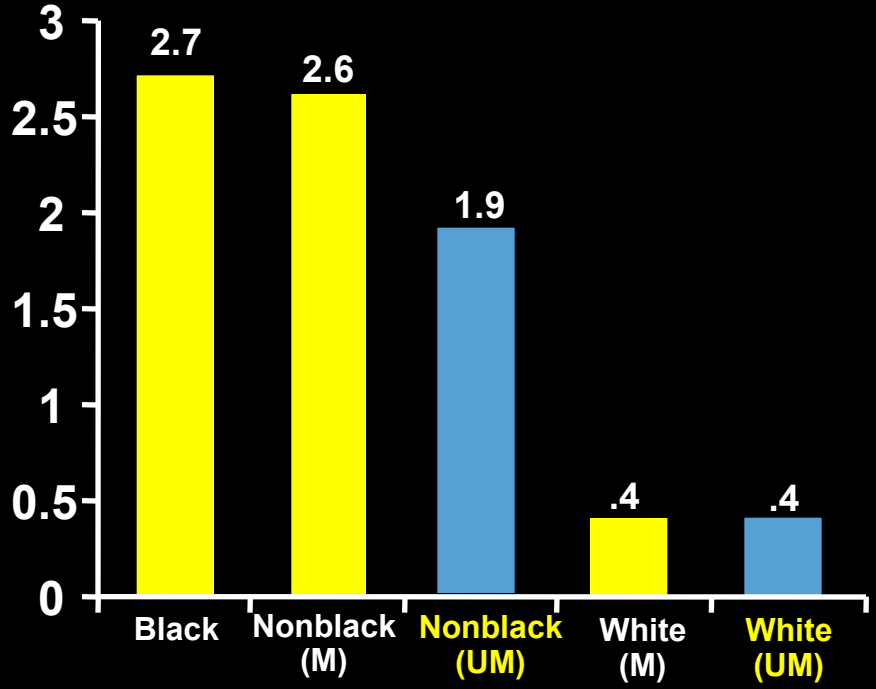
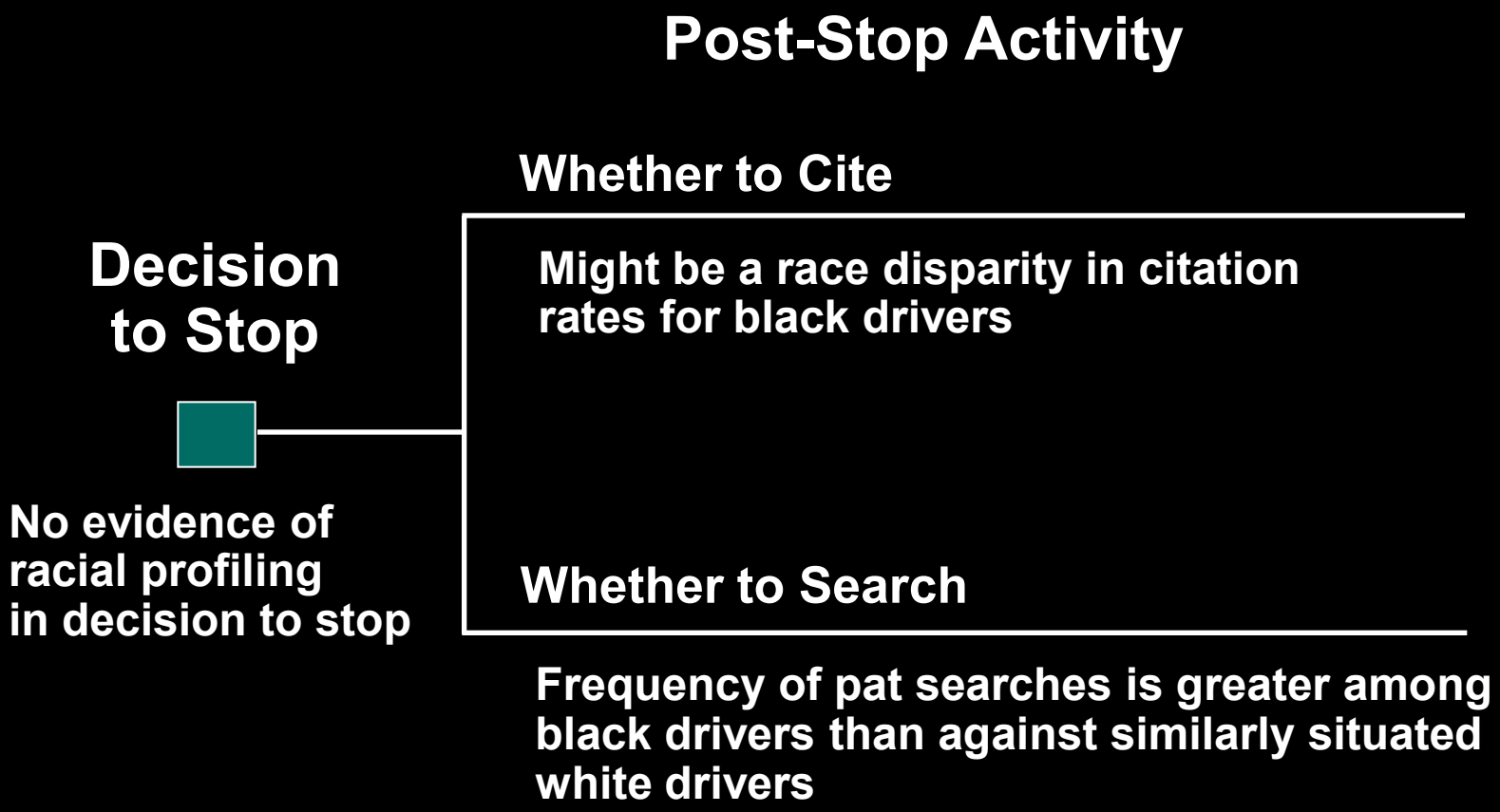


Summary: Is There Racial Profiling in Oakland?



Broader Conclusions

- It is possible to do more credible analyses of racial profiling
  - Objective analyzer using credible approach
- Naïve analysis methods can exaggerate (or even understate) the effect of racial bias
- Importance of credible analyses increases as data collection becomes mandated

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- **It is possible to do more credible analyses of racial profiling**
  - **Objective analyzer using credible approach**
- **Naïve analysis methods can exaggerate (or even understate) the effect of racial bias**
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We will be applying approach with data from other cities

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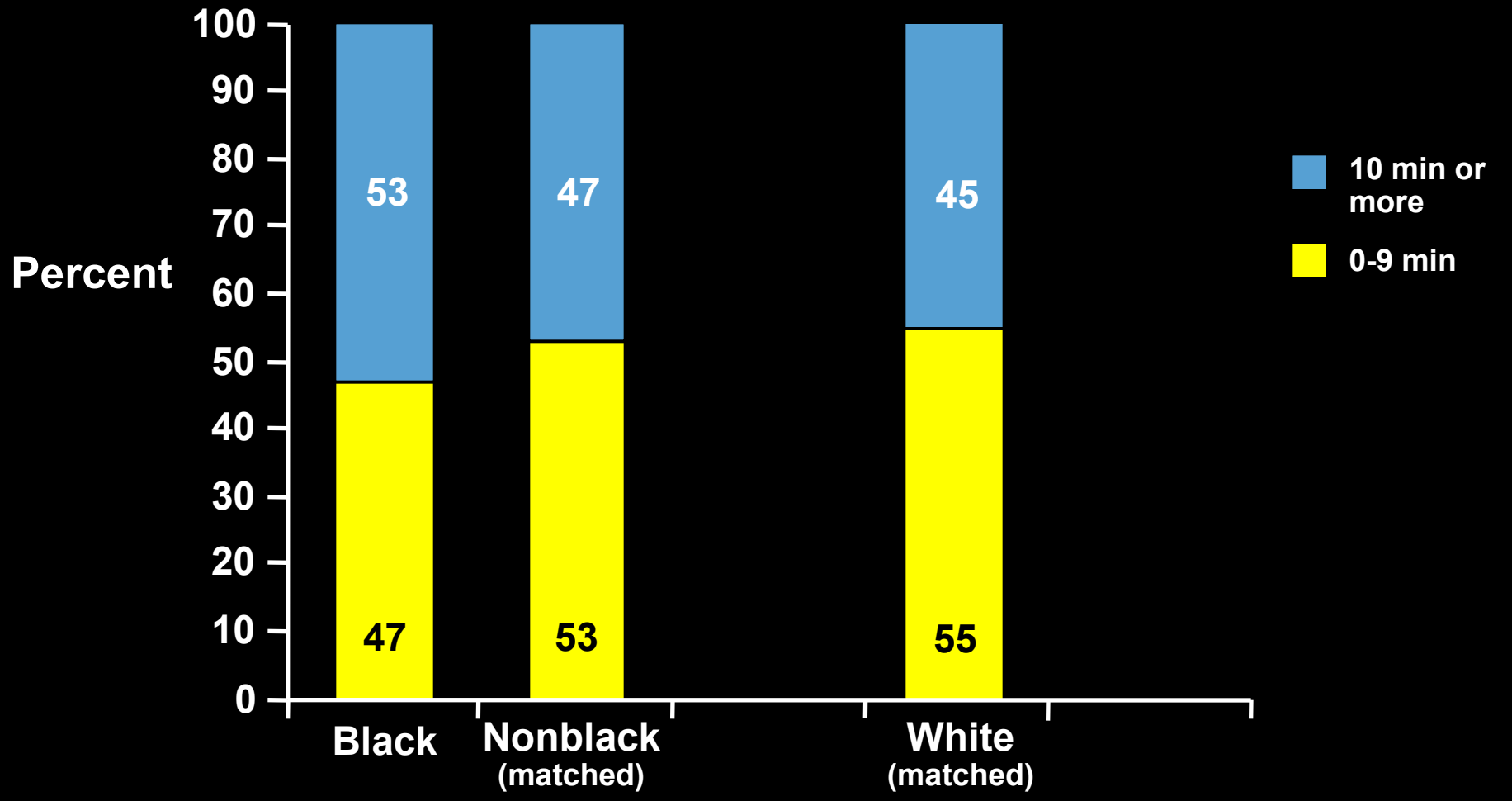
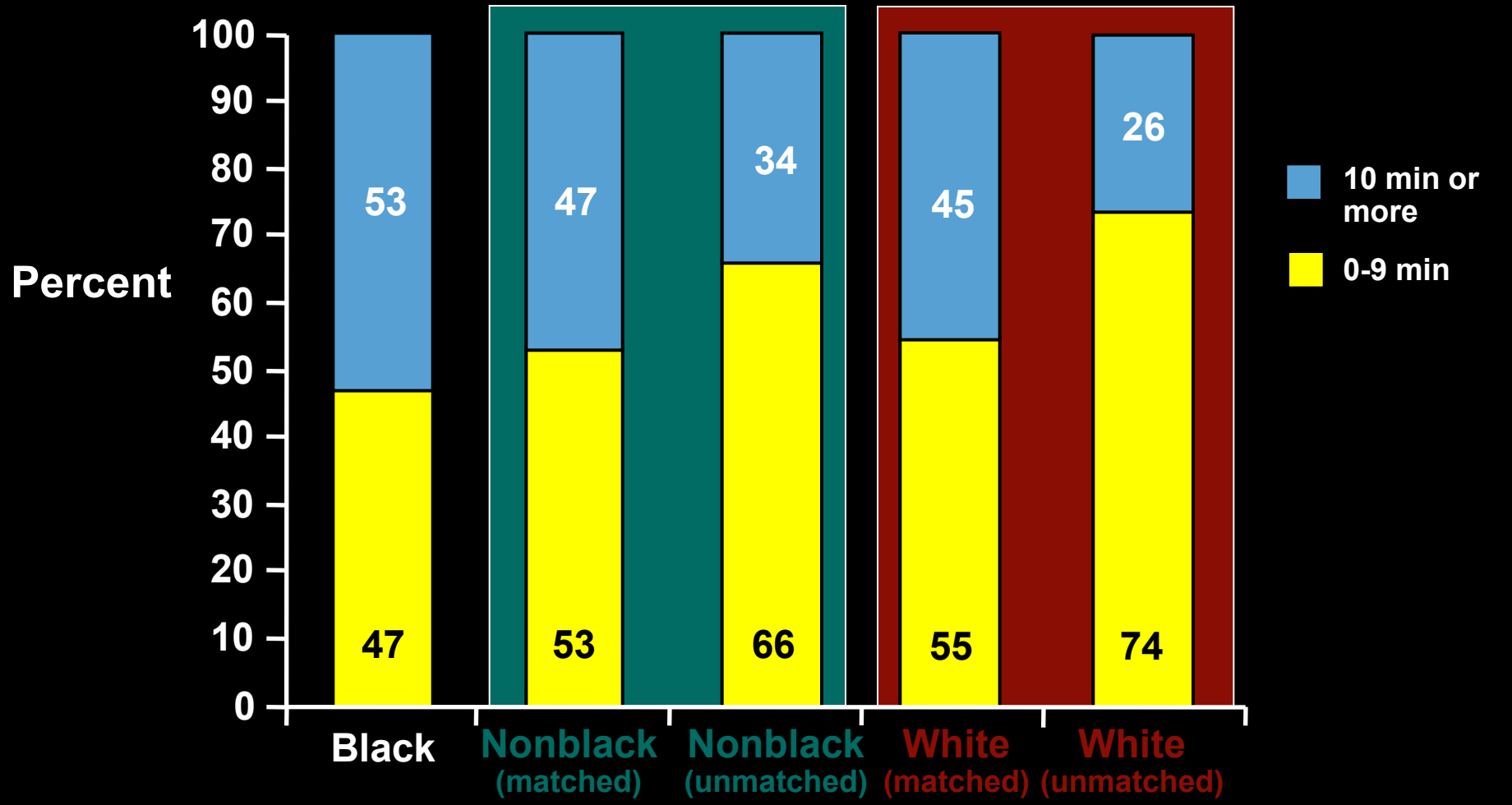
Black Drivers Seemed More Likely to Have Longer Stops Than Nonblack or White Drivers



Naïve Comparisons Considerably Overstate the Problem



Sensitivity Analysis Tests Show the Findings Are Robust

Issue	Analysis Result
Could still be racial bias if many fewer black drivers were at risk of being stopped during the day	• But to change finding, difference in exposure would need to change by 10 percentage points • Unlikely given control for clock time
Could still be racial bias if there were seasonal changes in racial distribution over June–December period	• But repeating analysis using only October and November data does not change the finding
Could still be racial bias because stops are under-reported in the data	• But approach is robust to some kinds of underreporting, even if reporting rates differ for black/nonblack drivers

Approaches to Dealing with "Benchmarking" Problem Are, in Turn, Problematic

Approach	Problem
Using census data	
Using traffic surveys	
Using only outcomes of the stop	

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Using traffic surveys	• Are expensive • Validity may fail in multi-ethnic environments • Provide only limited measure of driver care
Using only outcomes of the stop	• Avoids the challenging problem of detecting bias in the decision to stop