

# Factors Associated with Bicycling to High School in Davis, CA

Susan Handy

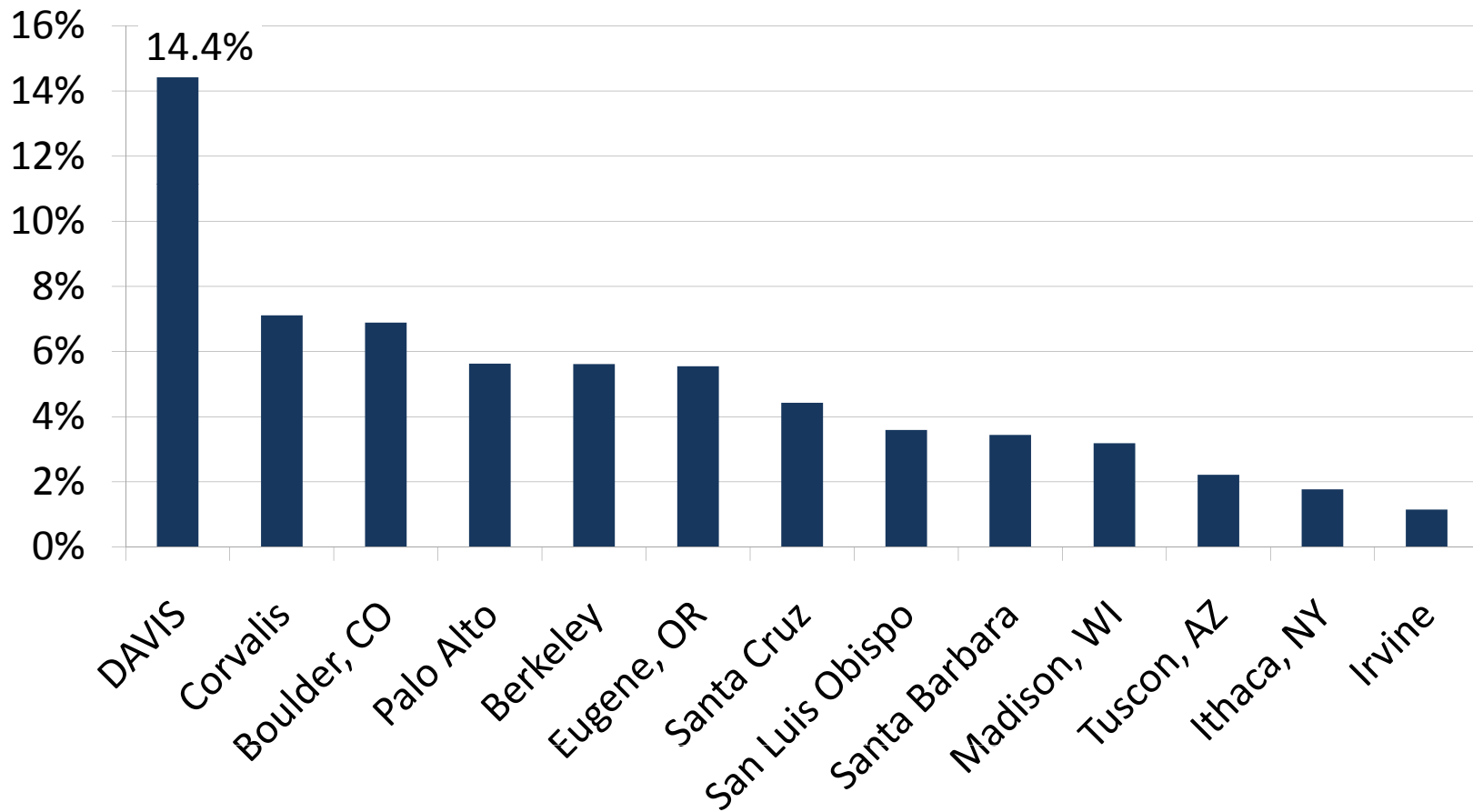
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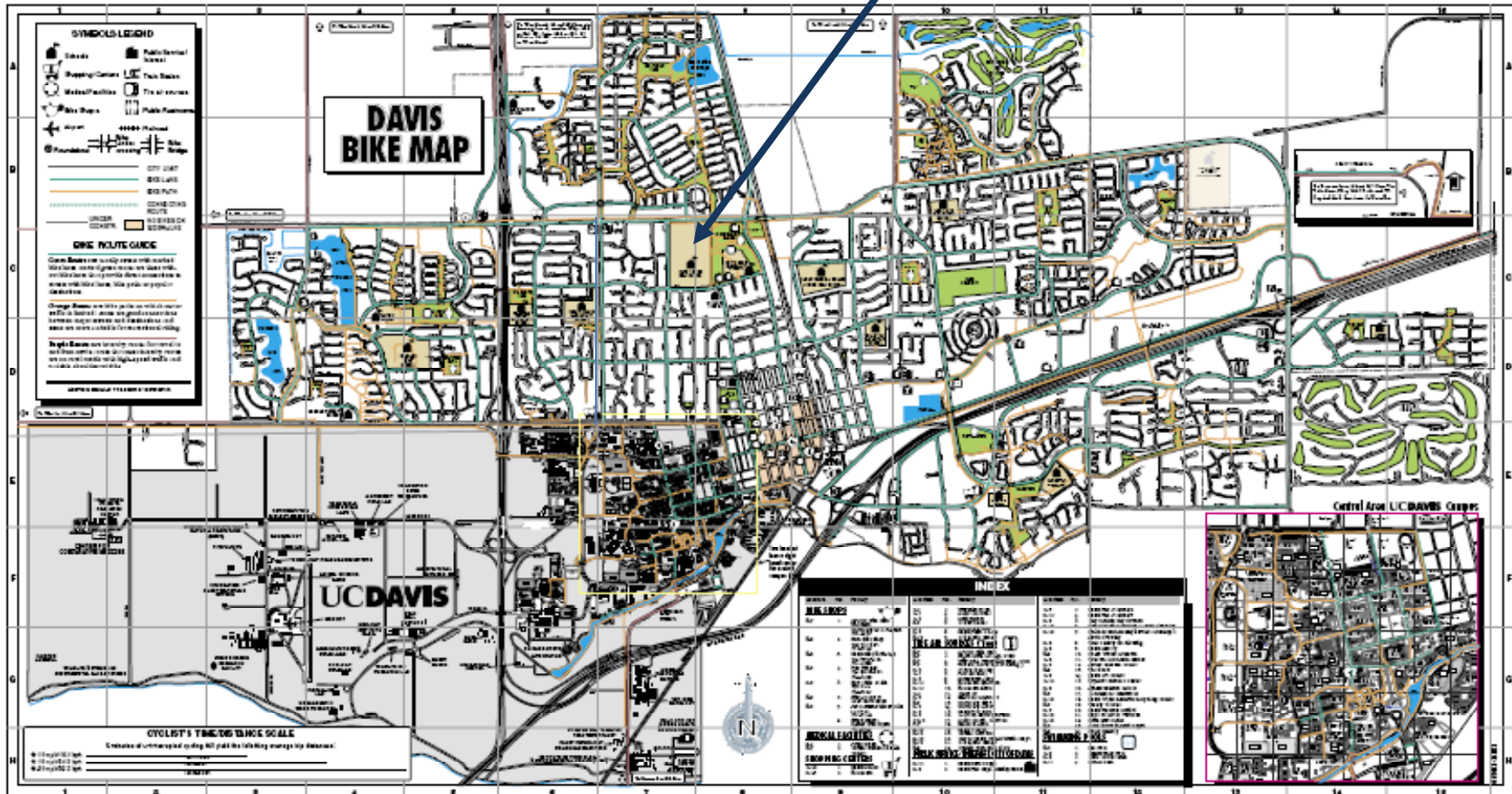
*of the Institute of Transportation Studies*

# Percent Bicycling to Work



Source: 2000 U.S. Census

Davis High



- On-street bike lanes
- Off-street bike paths

— 1 Mile



*What factors explain whether a Davis High student bicycles or not?*

vs. 1970s...





# Davis High School Bike Survey

- Schools:
  - Davis High (1634 students)
  - DaVinci High (300 students)
- In-class survey:
  - 4<sup>th</sup> period on April 15, 2009, except for P.E.
  - Distributed and collected by students in the Environmental Club
  - 1363 completed surveys, roughly 75% response rate



# Conceptual Model

## Individual Factors:

age, driver's license,  
gender, mode preferences,  
attitudes, biking comfort,  
practical issues



## Social Environment

### Factors:

peers, parents, community



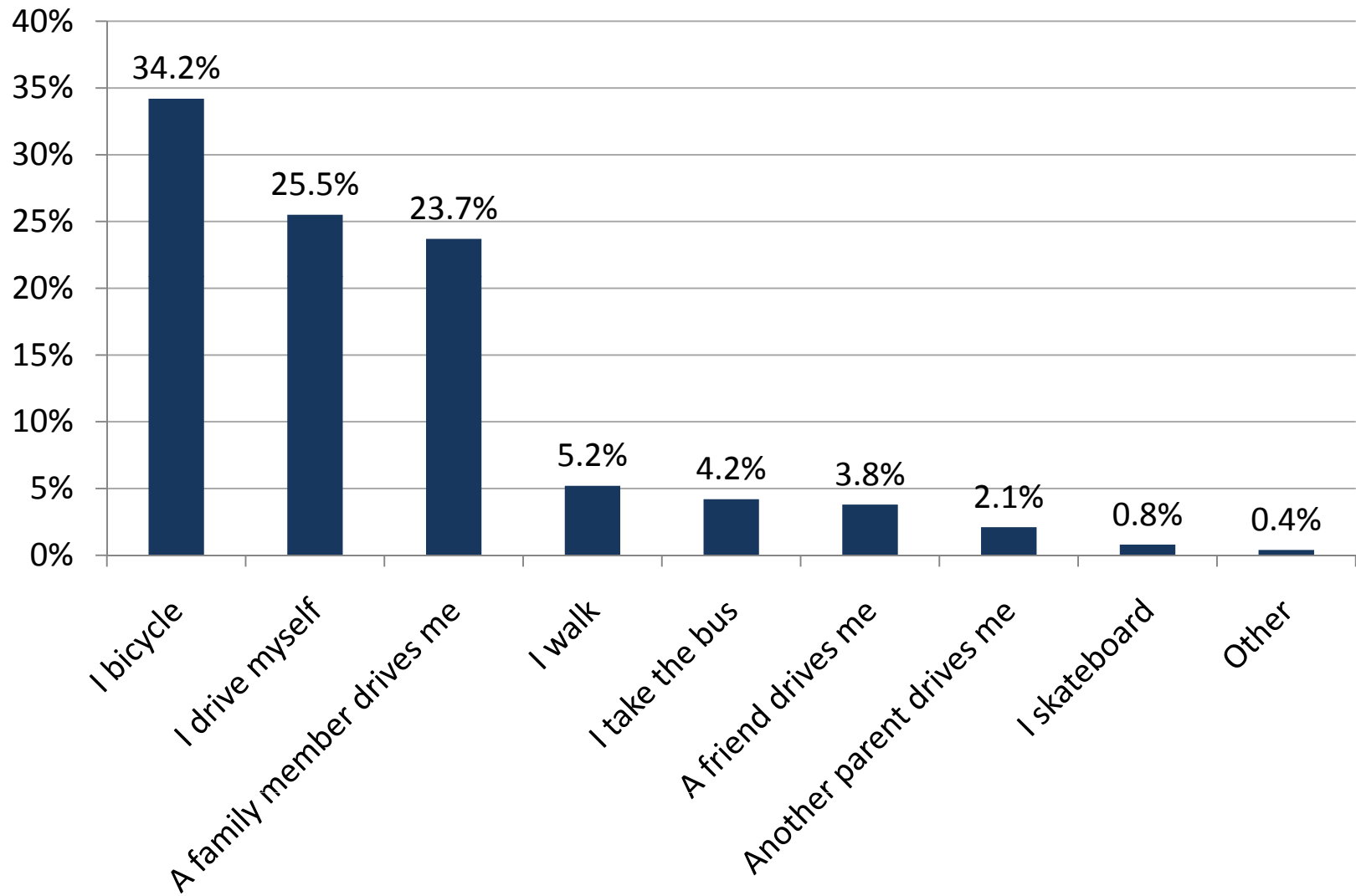
## Physical Environment

### Factors:

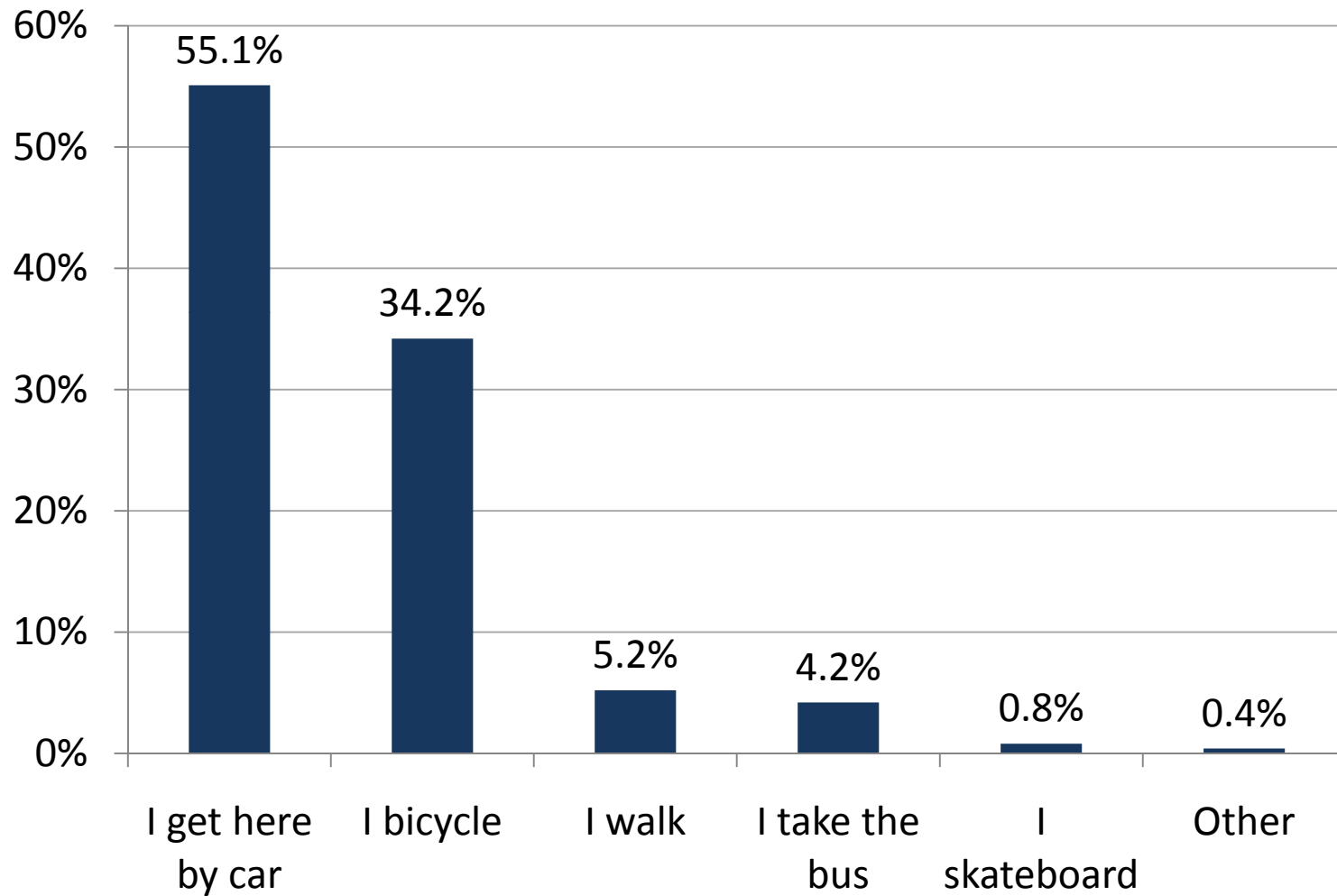
distance, safe route, direct  
route, parking



# Usual mode of travel to school

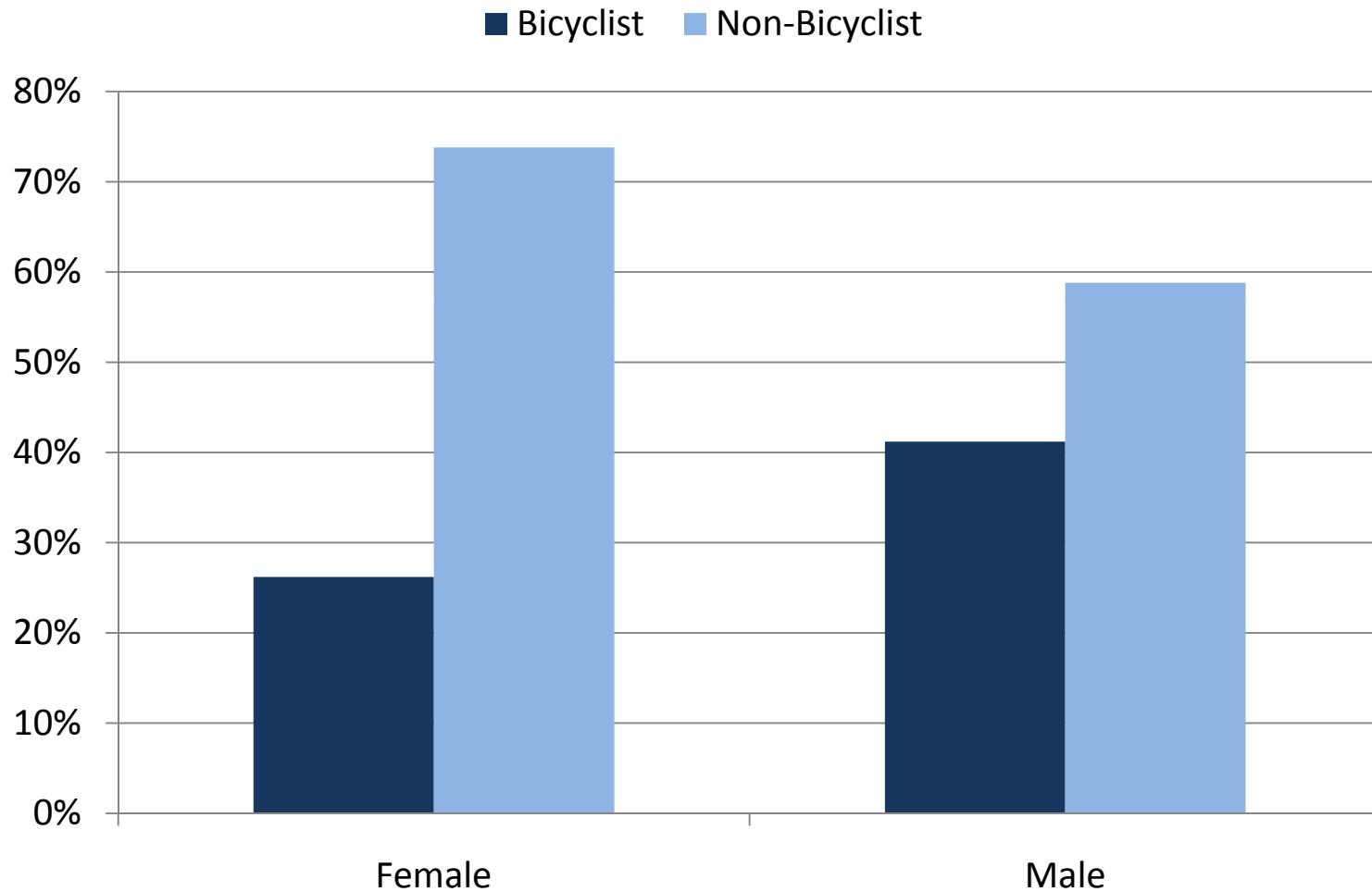


# Usual mode of travel to school

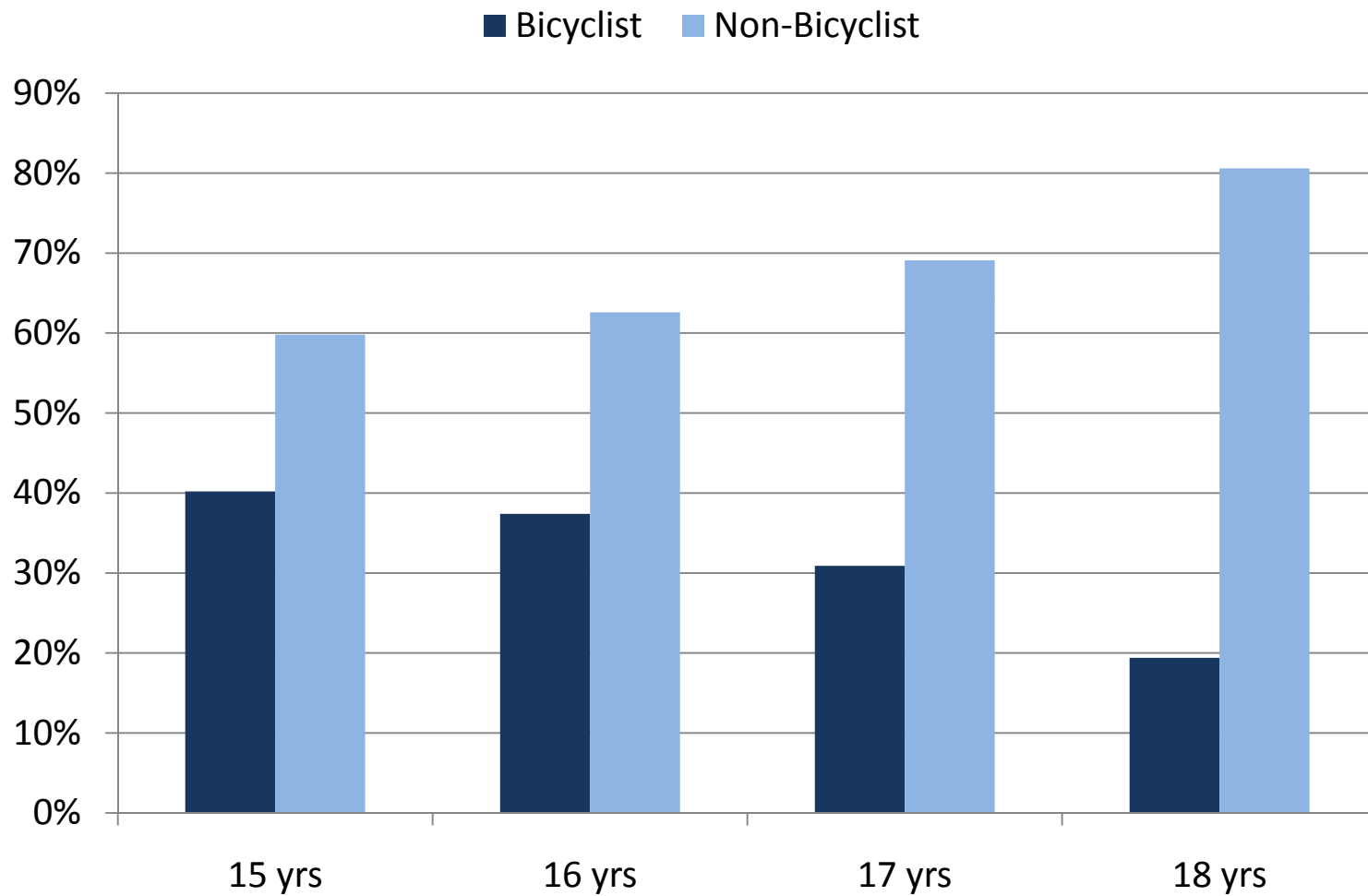




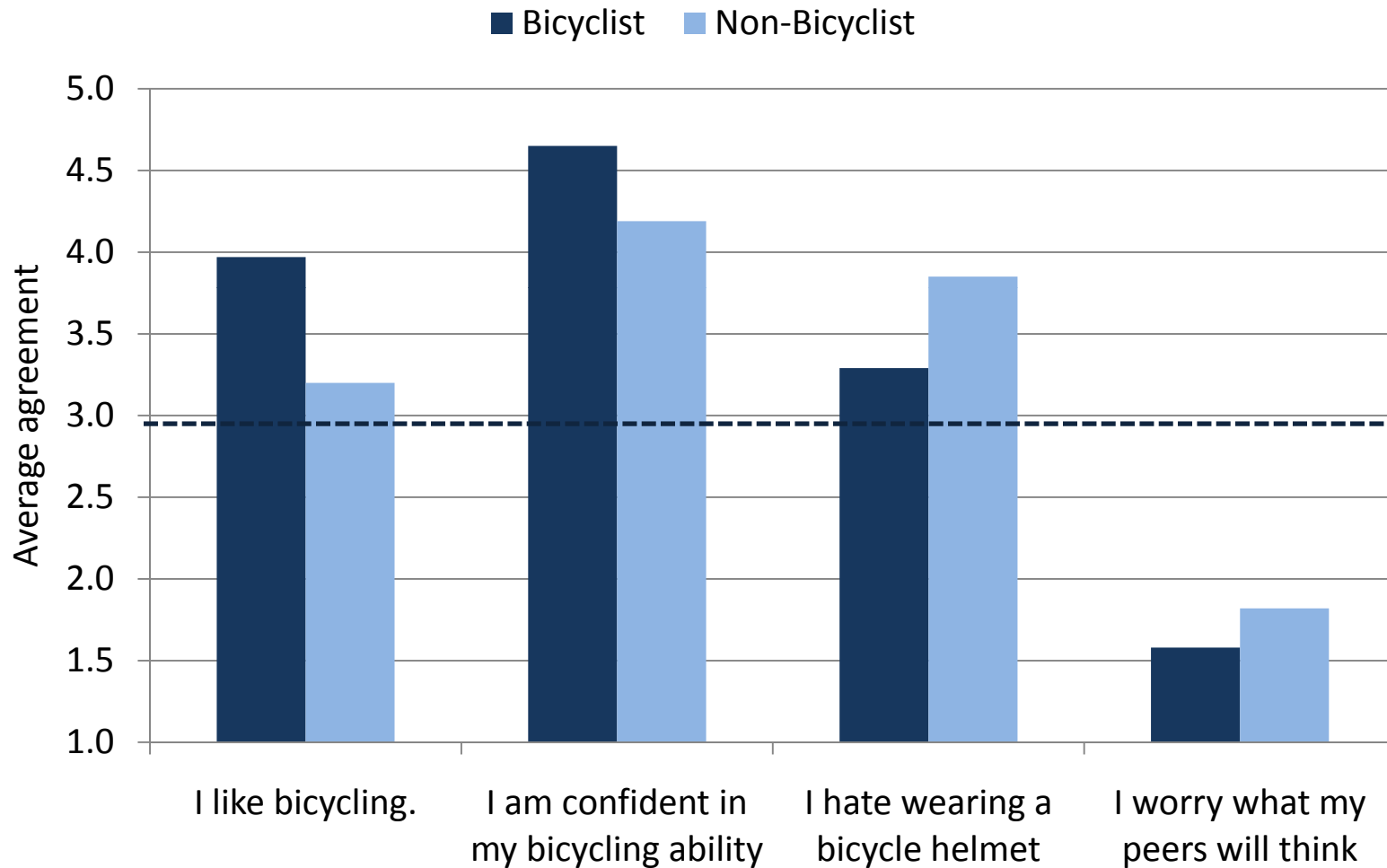
# Bicycling to School by Gender



# Bicycling to school by age



# Attitudes by Bicycling to School



# Model for Bicyclist or Not



Variable Name		OR
<i>Demographics</i>		
Female	-	0.42
Have drivers license	-	0.33
Parent has at least Bachelor Degree	+	1.68
<i>Individual factors</i>		
Like being physically active	+	1.22
Like to bicycle	+	1.26
Bicycling ability confidence	+	1.25
Need a car to do things I like	-	0.79
Often go off-campus for lunch	-	0.76
<i>Social-environment factors</i>		
Parents encourage bicycling	+	2.13
Can rely on parents chauffeuring them	-	0.84
Live in strong bicycle community	-	0.62
Fear of bicycle theft	+	1.26
<i>Physical-environment factors</i>		
Live too far from school to bicycle	-	0.54
<i>Valid N</i>		1214
<i>Adjusted McFadden Pseudo R-squared</i>		0.397

# Policy Implications

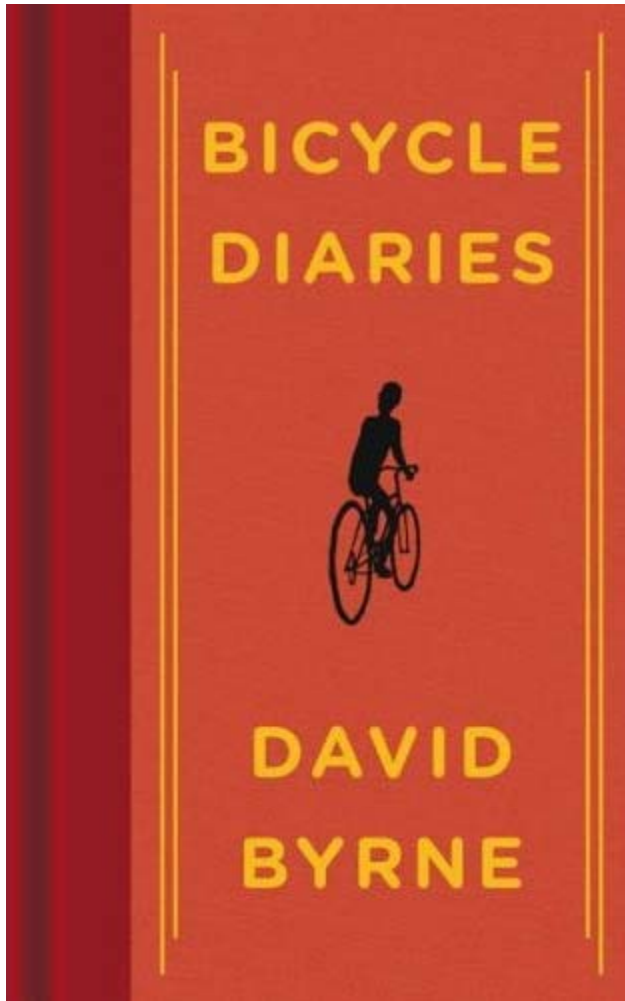
- Site schools within bicycling distance
- Increase bicycling confidence
- Make bicycling fun
- Reconsider school lunch policies
- Get parents to encourage bicycling!
- Figure out what it'll take to get girls bicycling!



# The 4 E's

Engineering	 
Education	
Encouragement	
Enforcement	





“I’ve been riding a bicycle as my principal means of transportation in New York since the early 1980s.”



Thanks!