

# Chapter 4

## Patterns of Menthol Cigarette Smoking in the US

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# Family Smoking Prevention and Tobacco Control Act 2009

“the issue of the impact of the use of menthol in cigarettes on the public health including such use among children, African Americans, Hispanics, and other racial and ethnic minorities”

# Objectives

- Describe the origin and early history of mentholated cigarettes.
- Describe the pattern of menthol cigarettes use in the U.S. populations.
- Describe prevalence of menthol use by race/ethnicity, gender and other social factors.

# METHODS

## Evidence-gathering approach

- Selected for inclusion if they directly compared smoking menthol cigarettes and patterns in US demographic groups. In addition, tobacco industry documents that provided a history of menthol cigarettes smoking were included.
- After excluding irrelevant studies **9 peer-reviewed** publications were included. We also included presentations given by Ralph S. Caraballo, Valerie Yerger and Altria at the FDA Tobacco Products Scientific Advisory Committee meetings. In addition, tobacco industry documents were included.

# Studies of Patterns of Menthol Cigarette Smoking

Study	Study Periods	Population	Limitations	Definition of menthol cigarette smoking
Lawrence et al. 2010 Tobacco Use Supplements to the Current Population Survey	2003 and 2006/07	Adult current smokers (n = 63,193)	<ul style="list-style-type: none"> <li>• Cross-sectional study</li> <li>• Small sample sizes for the AI/AN and API</li> </ul>	Respondents reported the status of their usual cigarette smoked as Menthol or nonmenthol
National Survey on Drug Use and Health	2004 to 2008	Persons aged 12 or older (n =68,736)	<ul style="list-style-type: none"> <li>• Cross-sectional study</li> </ul>	Respondents reported smoking part or all of a menthol cigarette in the past 30 days
Giovino et al, 2003	1999 National Household Survey (NHS)  1998,99, 2000 Monitoring the Future (MtF)  2000 National Youth Tobacco Survey (NYTS)  2002 International Tobacco Control Policy Evaluation Survey (ITCPES)	12 and older (n= 71,764)  8 <sup>th</sup> , 10 <sup>th</sup> , and 12 <sup>th</sup> graders (n= 136,000)  middle and high school students (n= 35,838)  18 and older ever smokers (n=2500)	<ul style="list-style-type: none"> <li>• Misclassification of self reported menthol status</li> <li>• Cross-sectional study</li> </ul>	NHS, MtF, NYTS: Those who smoked in the past 30 days and reported mostly smoking menthol cigarettes  ITCPES: Those who have smoked at least 100 cigarettes in their lifetime and at least one in the past 30 days: if brand they smoke more than any other is menthol

# Studies of Patterns of Menthol Cigarette Smoking

Study	Study Periods	Population	Limitations	Definition of menthol cigarette smoking
<p>FDA Presentation (Ralph S. Caraballo)</p> <p>Rock et al 2010</p>	<p>2004-2008 NSDUH Survey</p>	<p>12 years old and older (n=68,000)</p>	<ul style="list-style-type: none"> <li>• Cross-sectional study</li> <li>• Accuracy for self-reporting smoking methanol cigarettes</li> </ul>	<p>Cigarettes smoked in the past 30 days were menthol</p>
<p>Hersey et al 2010</p>	<p>2006 NYTS</p>	<p>Grades 6<sup>th</sup>- 12<sup>th</sup> N= 27,038</p>	<p>Misclassification of self reported menthol status Cross-sectional study</p>	<p>Based on consistency between smokers' report of the brand and the menthol status of the cigarettes they usually smoked.</p>

# References for Origins and Early History

- “The Growth of Menthols 1933-1977”
  - Prepared by Market Science Associated (MSA) for Brown and Williamson in 1978
  - Purpose – “to examine the trends in menthol since 1950 in order to obtain a better grasp of the factors which control the course of menthols and Kool.”
  - Full report available in Legacy Tobacco Industry Documents Library  
<http://legacy.library.ucsf.edu/tid/dtd30f00>
- “A History of Mentholated Cigarettes – This Spuds for You” by JR. Reid (for B&W)
- Submissions to TPSAC by Altria

# References for Origins and Early History

- Gardiner P. The African Americanization of menthol cigarette use in the United States *Nicotine Tob Res.* 2004;6(Suppl 1); s55-56
- Sutton,C & Robinson G. The marketing of menthol cigarettes in the United States: populations, messages, and channels *Nicotine Tob Res.*2004;6(Suppl 1);s83-s91
- Kreslake JM, Wayne GF, Albert HR, Koh HK, Connolly GN. The menthol smoker: tobacco industry control of menthol in cigarettes and targeting of youth and young adults. *Am J pub Health*, 2008;98(9):1685-92

# References

## Recent Submissions to TPSAC

- “Marketing of menthol cigarettes and consumer perceptions” Anderson et al,
- “Menthol Cigarettes and Smoking Initiation: A Tobacco Industry Perspective” Klausner et al
- “Menthol cigarettes and smoking cessation behavior: A review of tobacco industry” Anderson et al.

# Summary

- Origins and growth of menthol cigarettes including introduction of new brands beginning in the mid-fifties is well documented
- Recently available tobacco industry documents and research on them contains the extensive documents on the growth of menthol cigarettes
- Consumer research, product development and marketing are inseparable from the growth of menthol cigarette use

# Key Points - History

- Menthol cigarettes originally considered being soothing to the throat and as an occasional break from hot, non-menthol cigarettes.
- The history of menthol cigarettes is dominated by the positioning, marketing and sales of Kool, Salem and Newport.
- Menthol cigarettes market began growth in 1956 and increased the next 20 years. From 1977-1985, peaked at 28% to 29%. Have maintained ~ 26%-27% in recent years.
- Marlboro Menthol sales increased beginning in mid-1990's
- Patterns of menthol use developed early among women, African American and young adult smokers.

**“Mentholated products were promoted to offer an alternative to the heavy, harsh, hot, and many times the unpleasant experience of non-mentholated products”**

**RJ Reynolds, 1984, syr97c00 (tid)2**

# References

## Tobacco Industry Documents (Still Under Review)

- “Menthol Review and New Product Implications” (Feb 6, 1990) (Bates #2044123054-3102)
  - industry data from multiple sources and summarizes use by gender, age, income , race, education, region and Nielson
- Black Smoker Studies
  - Black Smoker Characteristics Study 1978-75 (Bates #467204343-4496)
  - Black Smoker Studies (Various)
  - 1982 Black Metropolitan Smoker Studies

# Tobacco Industry Documents: Black Smoker Studies (Still Under Review)

- 1980 Black Smoker Study (Example)
  - Report to Brown and Williamson
  - Compares 1976-1980 data
  - Was 10<sup>th</sup> annual Black Smoker Study
  - 1980 Study expanded sample markets to LA and New York to increase sample size from 1000-1125
  - Used door to door, in-depth interviews
  - US census data was used to weight the quota sample to representative of age and sex

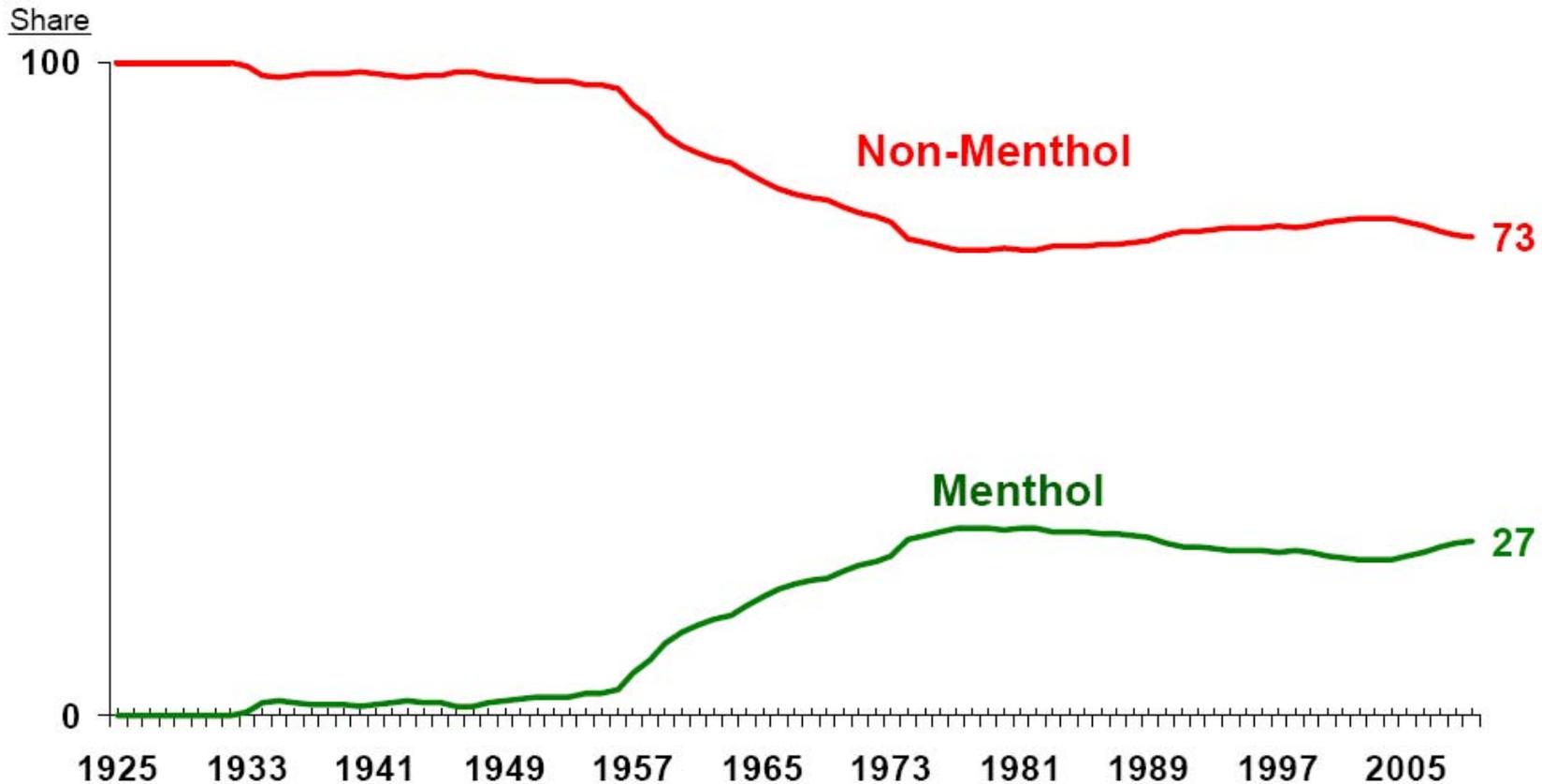
# Tobacco Industry Documents (Still Under Review)

- 1982 Black Metropolitan Smoker Study (Bates #465980718-0822)
  - Report to Brown and Williamson in March 1983
  - Sample of approximately 100 black smokers in 12 metropolitan areas – then weighted
  - Two phase – screening for age and sex , then in-depth interview conducted with one smoker per household
  - Means of isolating trends
  - Results compared to 1980 Black study and 1982 National Brand switching study to compare trends among brands as well as differences between blacks

# Importance of Black Smoker Studies

- Show different results than reported data from the National Brand Switching Studies and others (Roper). 1982 study showed :
  - B&W's share among Blacks was twice as large as it is in the Brand Switching studies (30% vs. 14%)
  - Blacks smoke full taste menthols over three times as frequently as Switcher respondents
- Much more in-depth historical understanding of marketing and consumer preferences research
- *We still* don't know what we don't know

# Menthol and Non-Menthol Cigarette Share Performance (Cigarette Shipments)

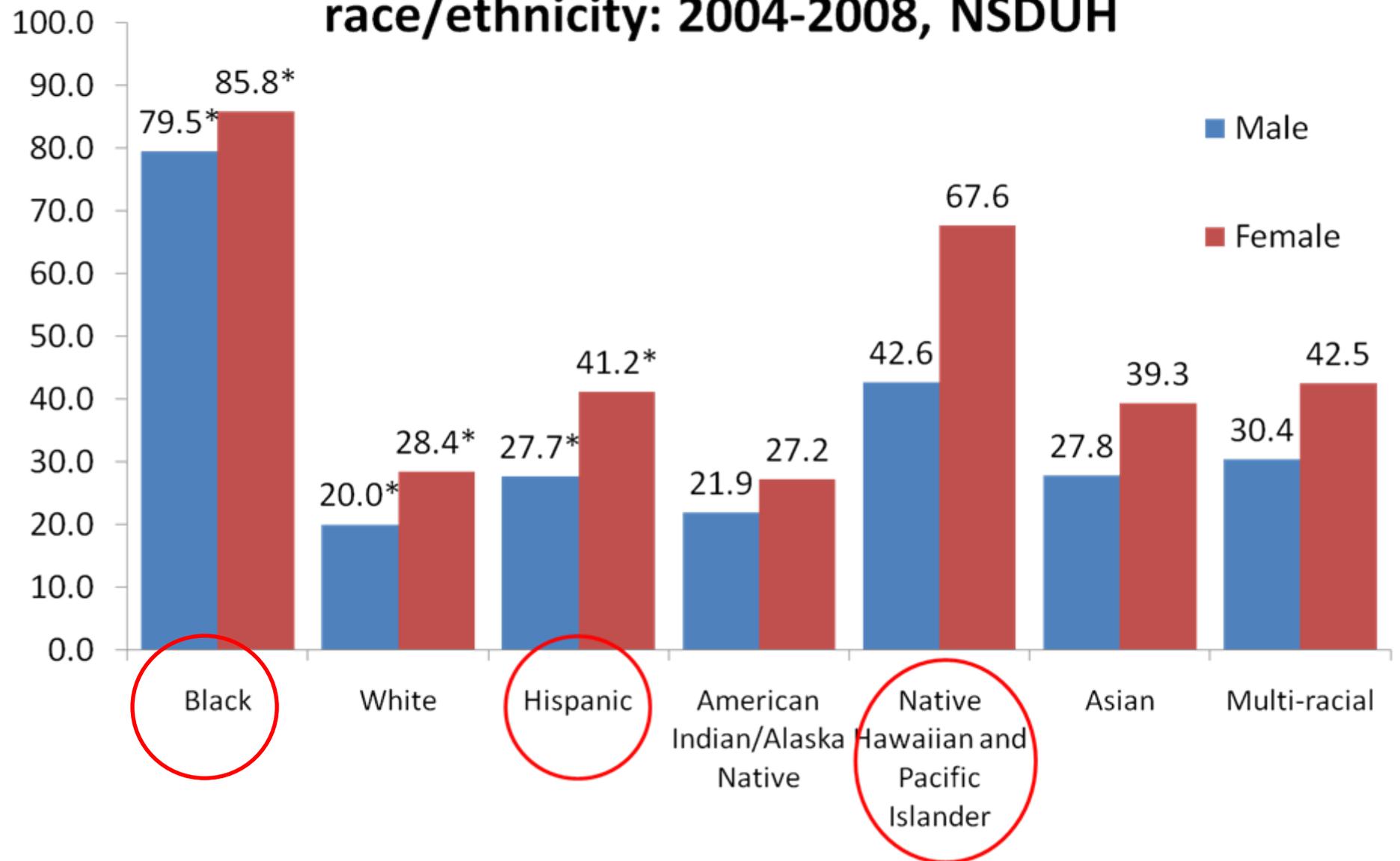


Source: Altria Client Services Proprietary Data, Shipment History 1974-2008; 72 Month Shipment 2009

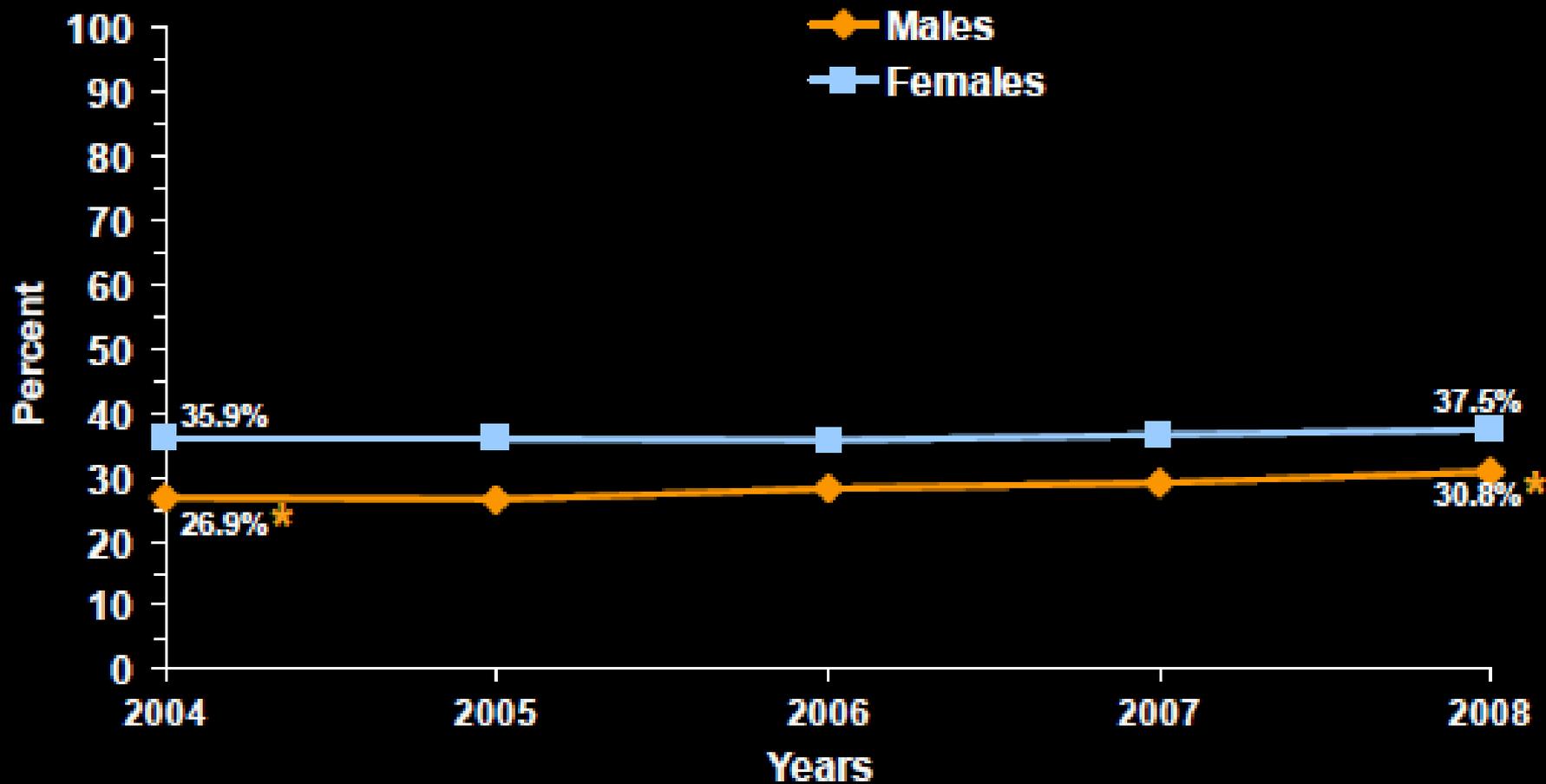
# Prevalence of mentholated cigarette smoking (NSDUH)

- 1.1 million adolescent menthol cigarette smokers aged 12 to 17 years in the United States between 2004 and 2008
- 18.1 million United States adult menthol cigarette smokers aged 18 years or older
- Average total number of menthol cigarette smokers in the United States was approximately 19.2 million each year between 2004 and 2008.

# Percent menthol cigarette use among past month cigarette smokers aged 12 and older by race/ethnicity: 2004-2008, NSDUH



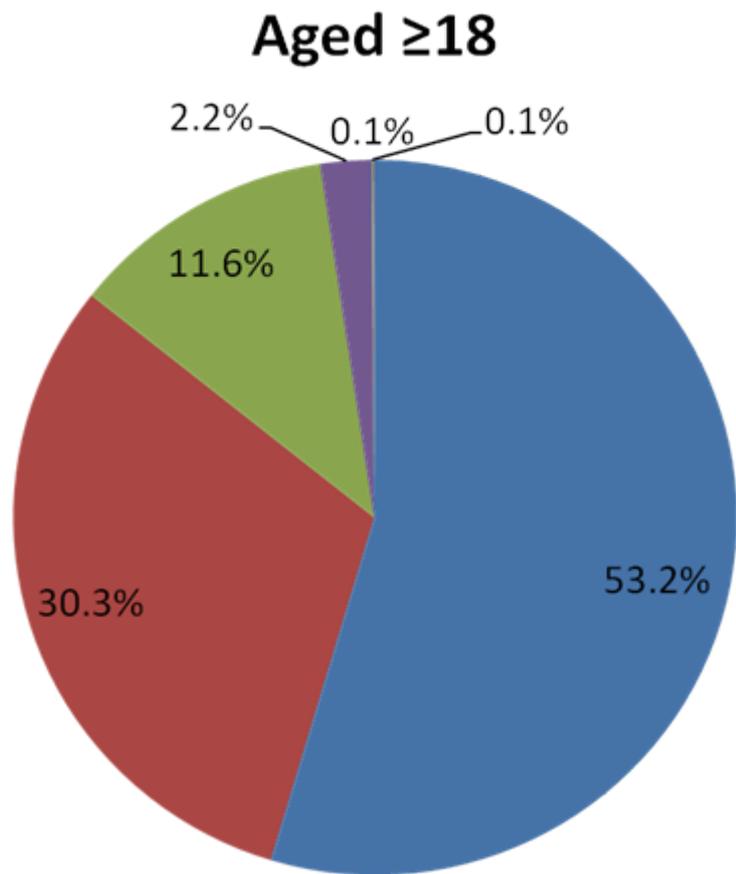
# Trends\* in Menthol Cigarette Use among Past Month Cigarette Smokers Aged $\geq 12$ Years, by Gender: 2004-2008



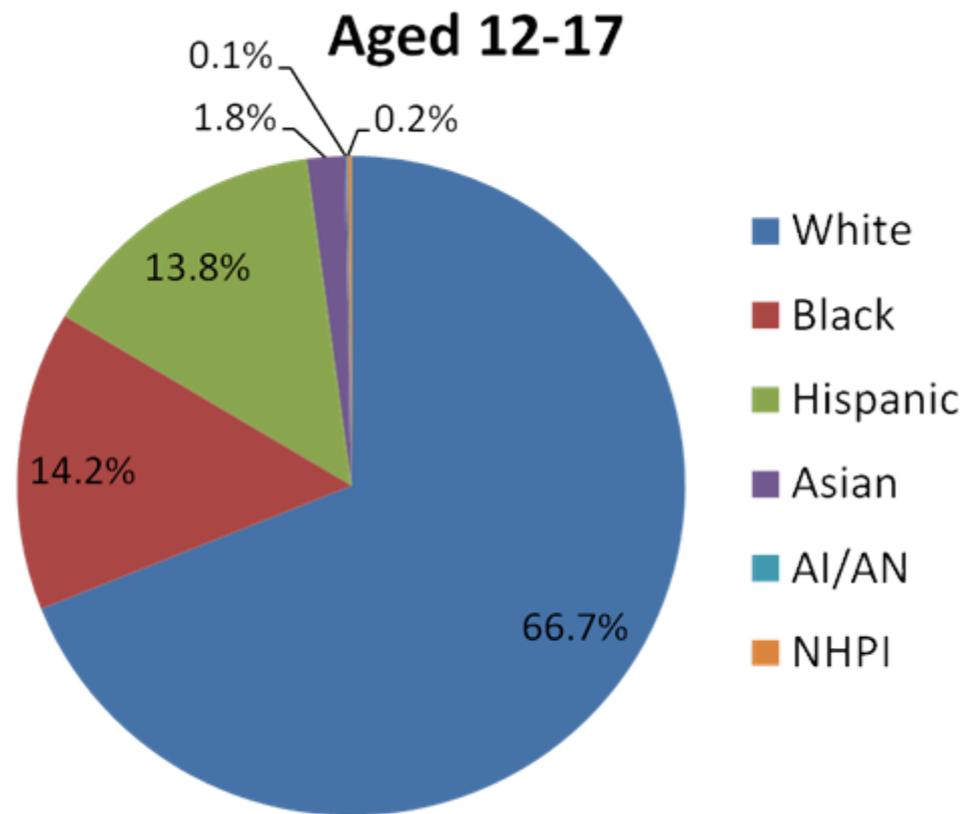
SAMHSA, OAS (November 19, 2008). The NSDUH Report: Use of Menthol Cigarettes. Rockville, MD

\*Statistically significant

# Percent of menthol cigarette use among past month cigarette smokers: 2004-2008, NSDUH

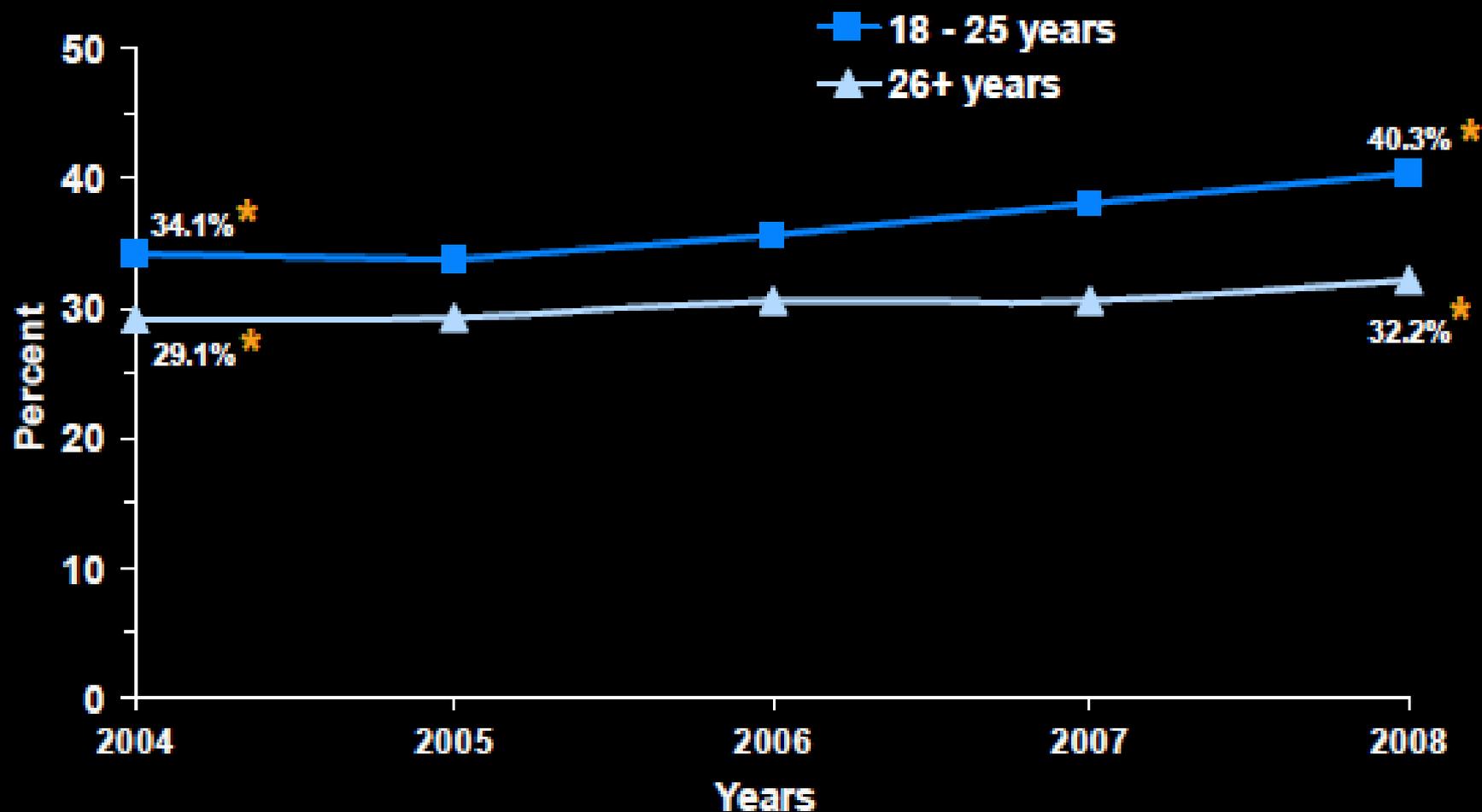


**18.1 million adults**



**1.1 million children**

# Trends\* in Menthol Cigarette Use among Past Month Adult Smokers, by Age Group: 2004-2008



Source: National Surveys on Drug Use & Health, 2004-2008

\*Statistically significant

“It takes less absolute menthol delivery to achieve the younger group’s higher ideal than it takes to achieve the older group’s lower ideal.”

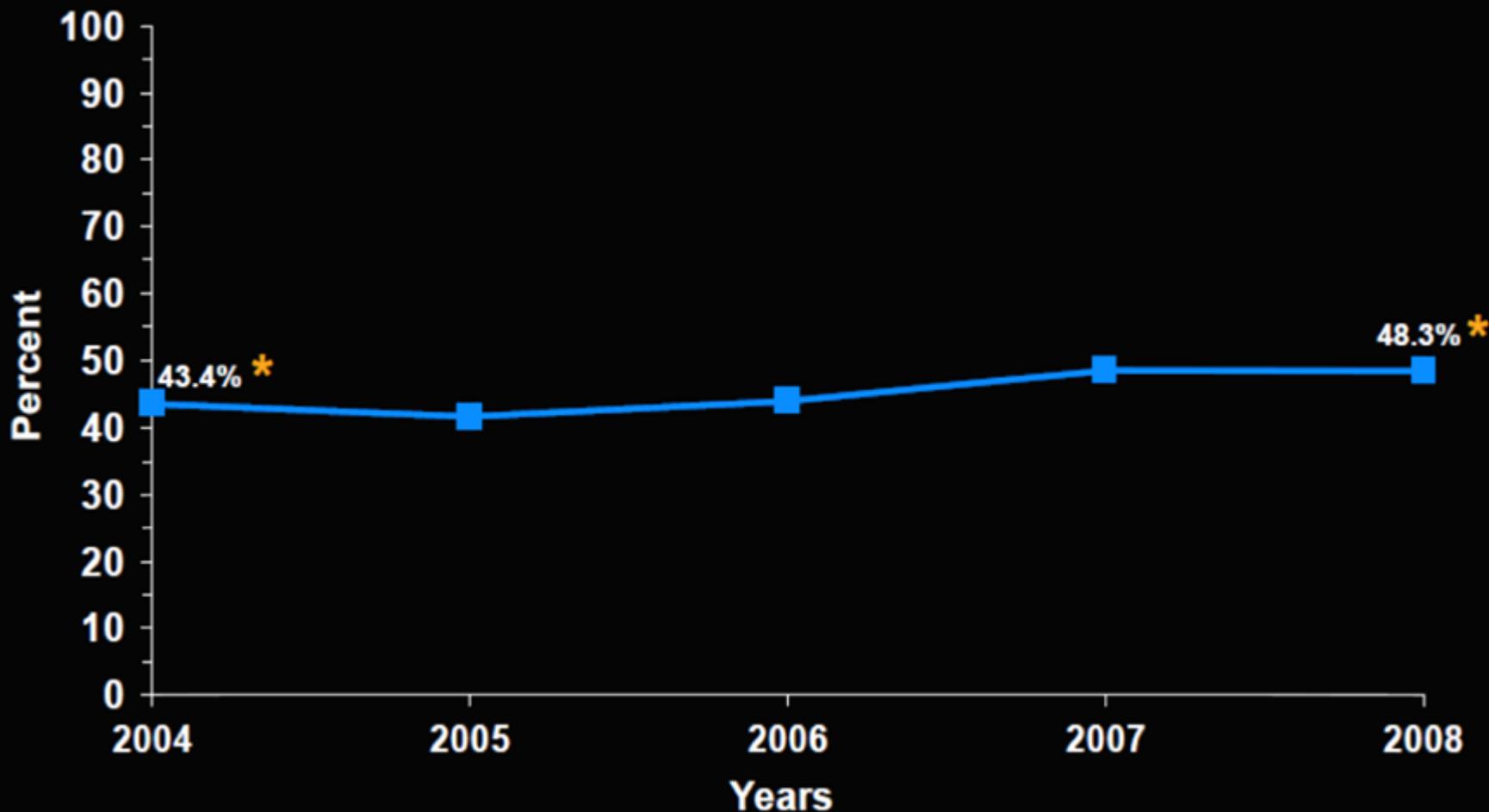
RJ Reynolds, 1982, gpp19d00  
(tid)**25**

# Percentage of Youth Smokers Who Used a Menthol Brand of Cigarettes in Middle School and High School: NYTS 2006

	All current smokers	
	Middle school (n = 771)	High school (n=2,510)
All youth smokers	51.7	43.1
Male	55.1	39.4
Female	48.1	46.9
Less than 1 year	42.2	42.8
<b>Black</b>	<b>80.6</b>	<b>84.8</b>
<b>Asian American</b>	<b>57.4</b>	<b>56.4</b>
White	43.1	37.6
Youth who are current smokers with either a menthol or a nonmenthol brand	6.3	19.7

**\*\*1.1 million children smoke menthol cigarettes\*\***

# Trends\* in Menthol Cigarette Use among Past Month Smokers Aged 12 – 17 Years: 2004-2008



Source: National Surveys on Drug Use & Health, 2004-2008

\*Statistically significant

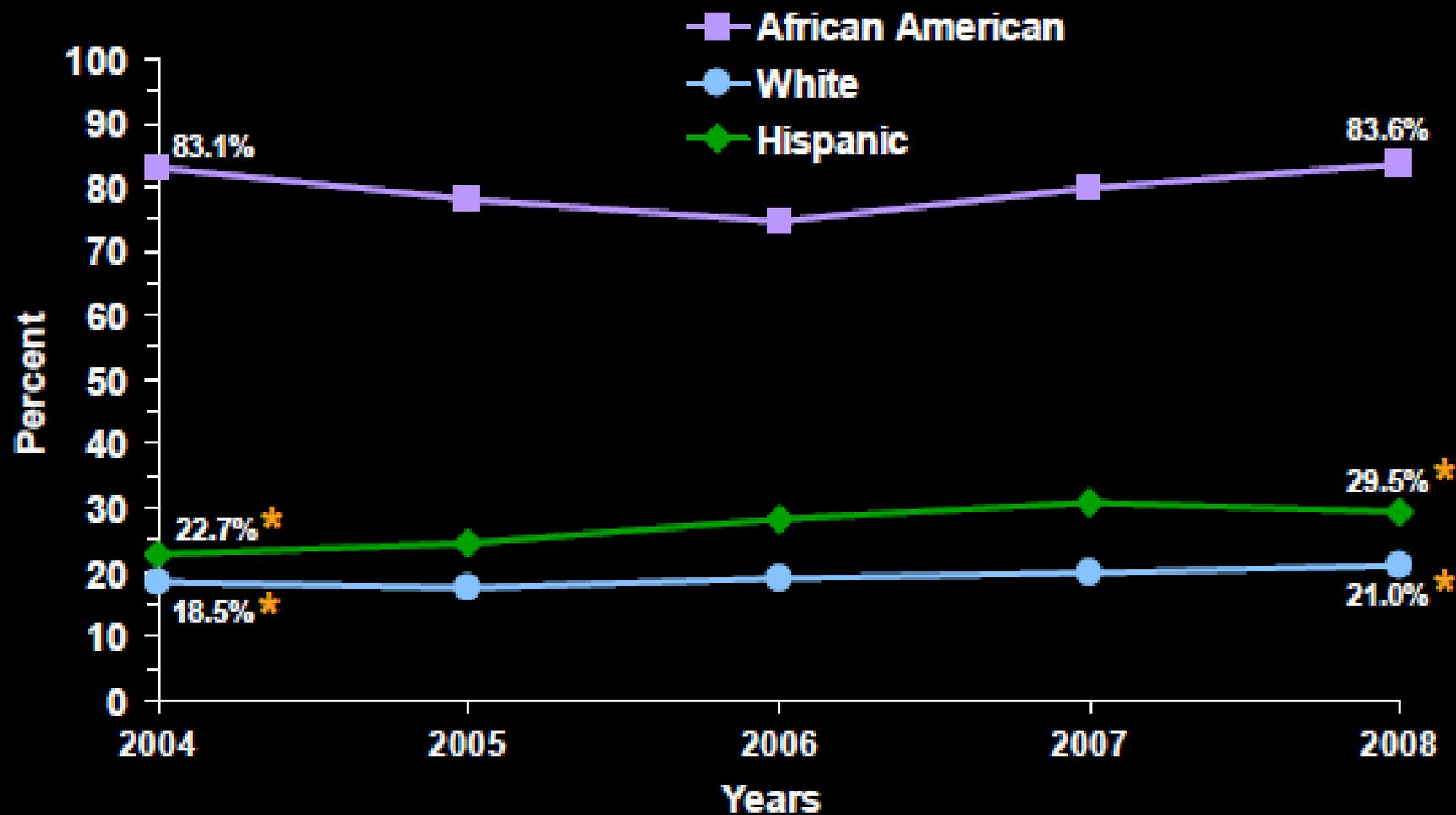
Prevalence of smoking mentholated cigarettes was highest in the following sociodemographic categories, TUS CPS

	Prevalence (%) [95% CI]	
<b>Black race</b>	73.6	[71.97 – 75.16]
Birth in a US territory	53.6	[47.03 – 59.94]
Unemployed	35.6	[33.83 – 37.45]
Annual family income of less than \$10 000	34.9	[33.28 – 36.60]
Residence in the Northeast	33.9	[32.66 – 35.23]
Never married	32.8	[31.87 – 33.83]
Consumption of less than 10 cigarettes per day (cpd)	32.8	[31.82 – 33.77]
Female gender	32.4	[31.73 – 32.99]
Education level of 9–11 years	32.2	[30.86 – 33.56]
18–24-year-old age group	32.0	[30.53 – 33.47]
Smoking on some days	29.6	[28.51 – 30.65]
Start of regular smoking after age 18	29.0	[28.28 – 29.67]
Residence in a metropolitan area	28.8	[29.29 – 29.41]
No use of other forms of tobacco	28.0	[27.49 – 28.51]

Prevalence of smoking mentholated cigarettes for men was highest in the following sociodemographic categories, TUS CPS

	Prevalence (%) [95% CI]
<b>Black</b>	68.9 [66.61 – 71.18]
Born in a US territory	52.0 [43.02 – 60.80]
Annual family income of less than \$10 000	30.9 [28.40 – 33.40]
18–24 years old	29.8 [27.94 – 31.75]
Living in the Northeast	29.6 [27.91 – 31.27]
Smoking 6–10 cpd	29.5 [28.09 – 30.92]

# Trends\* in Menthol Cigarette Use among African American, White, and Hispanic Men Aged $\geq 18$ Years, by Gender: 2004-2008



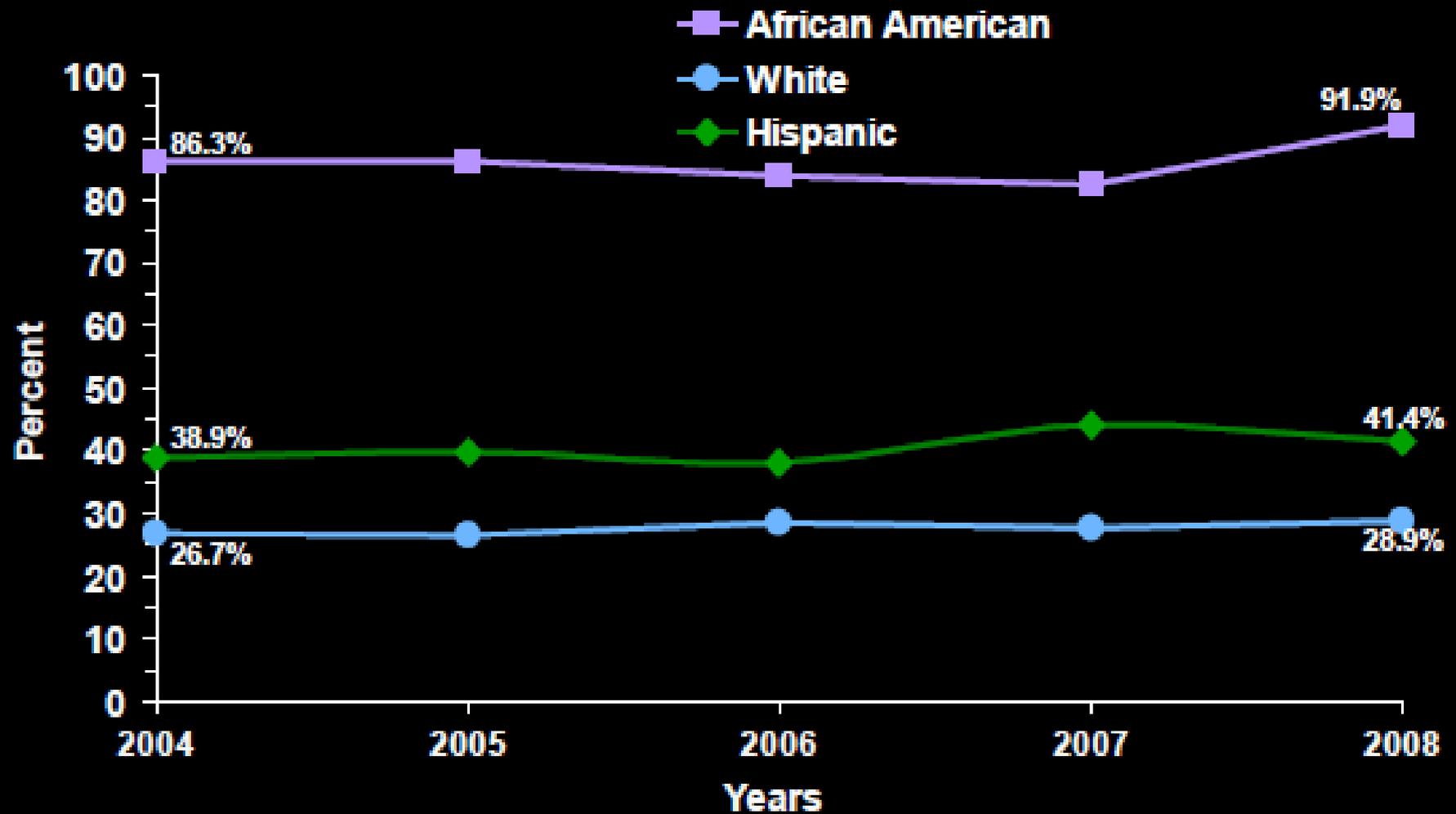
Source: National Surveys on Drug Use & Health, 2004-2008

\*Statistically significant

Prevalence of smoking mentholated cigarettes for women was highest in the following sociodemographic categories, TUS CPS

	Prevalence (%) [95% CI]
<b>Black</b>	78.7 [76.76 – 80.59]
Born in a US territory	55.7 [46.08 – 64.84]
Never married	40.3 [38.90 – 41.63]
Living in the Northeast	38.7 [37.05 – 40.28]
Annual family income of less than \$10 000	38.3 [36.34 – 40.34]
Smoking <5 cpd	35.8 [34.41 – 37.16]
Educational level of 9–11 years	36.7 [34.82 – 38.53]
18–24 or 45–64 years old	34.5 [32.55 – 36.59]
Started smoking after age 18	34.3 [33.36 – 35.19]
Smoking on some days	34.2 [32.71 – 35.70]

# Trends in Menthol Cigarette Use among African American, White, and Hispanic Women Aged $\geq 18$ Years, by Gender: 2004-2008



# Other Special Populations

- There were no peer-viewed journals on menthol cigarette smoking and mental illness.
- There are very few studies on menthol cigarette smoking among minority and youth populations.

## Limitations

- One issue that has been discussed in the scientific literature is that both youth and adult smokers may under-report menthol cigarette use.
- NSDUH, TUS CPS, NYTS data come from cross-sectional surveys.

*“Newport ads are, and have been, predominately directed to the general market. Not disproportionately weighted toward African Americans or any other ethnic group.”*

**Leonard H. Jones**

**Lorillard Tobacco Company**

**Meeting of the Tobacco Products Scientific Advisory Committee**

**July 15-16, 2010**