### **BRIEF REPORT**

# Young Adults' Behavioral Intentions Surrounding a Potential Menthol Cigarette Ban

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# **ABSTRACT**

**Introduction:** Menthol cigarette smoking is more prevalent among young adults, who are a known target of tobacco industry marketing. This study explores young adults' menthol use and behavioral intentions in the event of a ban on menthol cigarettes.

**Methods:** Data from 2,871 respondents of the 2011 National Young Adult Health Survey were examined to estimate young adults' current smoking, current menthol smoking, and behavioral intentions in the event of a menthol cigarette ban.

**Results:** Of all respondents, 23.8% were current smokers, and 40.3% of the current smokers were menthol smokers. Menthol use was significantly higher among 18- to 24-year-olds versus 25- to 34-year-olds (51% vs. 34.3%, p = .02) and was significantly associated with race/ethnicity (p < .0001), with prevalence highest among Black smokers (82.0%). Among menthol smokers, 65.7% indicated they would quit tobacco use altogether if menthol cigarettes were no longer sold, while 18.4% said they would switch to nonmenthol cigarettes, and 16.0% said they would switch to some other tobacco product (OTP). Behavioral intention was significantly associated with race/ethnicity (p = .02), where intention to quit tobacco was most prevalent among Black menthol smokers (79.3%), and concurrent use of OTPs (p = .03), where intention to switch to an OTP was more prevalent among menthol smokers who indicated concurrent OTP use (35.3% vs. 5.5%).

**Conclusions:** A majority of young adult menthol smokers stated they would quit smoking if menthol cigarettes were no longer sold, which builds on research finding public support for such a policy and on work modeling the public health impact such a ban could have.

## INTRODUCTION

The 2009 Tobacco Control Act (TCA) gave the U.S. Food and Drug Administration (FDA) the authority to regulate tobacco products, including cigarettes. Although the FDA banned the sale of flavored cigarettes as one of its first actions under the TCA, it did not ban mentholated cigarettes, a recommendation since made by many public health advocates (Tobacco Control Legal Consortium, 2013) and under consideration by the FDA (Convenience Store News, 2013). Menthol cigarettes are disproportionately used by certain population groups including African Americans and young people (Caraballo & Asman, 2011) and have been associated with both smoking initiation (Hersey et al., 2006; Villanti et al., 2012) and cessation difficulty (Delnevo, Gundersen, Hrywna, Echevarria, & Steinberg, 2011).

To date, two studies have examined public support for a ban on mentholated cigarettes with nationally representative samples of adults (Pearson, Abrams, Niaura, Richardson, & Vallone, 2012; Winickoff et al., 2011), albeit with somewhat different results, likely attributed in part to differences in samples, interviewing methods, and question wording and ordering (Pearson et al., 2012). While Winickoff et al. (2011) found that 56% of surveyed adults in 2009 supported a menthol ban, Pearson et al. (2012) found such support among 20% of adults survey in 2010. Winickoff et al. (2011) found that this support was particularly high among Black adults (68%–76%) and Pearson et al. (2012) noted that the adjusted odds of supporting a menthol ban was almost twice as high (adjusted odds ratio [AOR] = 1.8) among African Americans than Whites, a trend also found among menthol smokers relative to nonmenthol smokers (AOR = 2.1).

Some recent work has also explored menthol smokers' beliefs about what they would likely do if menthol cigarettes were banned by the FDA. Two studies with nationally representative samples found that about 39% of all adult menthol smokers (and 44%–47% of Black menthol smokers) indicated that they would quit smoking and not use any another product, rather than switch to nonmenthol cigarettes or to some other tobacco product (OTP) (Hartman, 2011; Pearson et al., 2012).

The present study aims to build on this research by exploring responses to this question with young adults in particular,

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the adult age group among which menthol cigarettes are most prevalently used (Caraballo & Asman, 2011; Hartman, 2011) and a popular legal target for marketing by the tobacco industry (Gilpin, White, & Pierce, 2005; Ling & Glantz, 2002).

### **METHODS**

We examined data provided by 2,871 respondents on the 2011 National Young Adult Health Survey (NYAHS), the first national cell phone survey of young adults designed to provide improved current estimates of tobacco measures among this priority population. Details about the survey's sampling methodology and benchmarks are reported elsewhere (Gundersen, ZuWallack, Dayton, Echeverria, & Delnevo, 2013). In brief, the NYAHS is a stratified random-digit-dial (RDD) cell phone survey of 18- to 34-year olds about tobacco use, attitudes, susceptibility, and behaviors, as well as obesity and physical activity, Internet and social media use, and demographic characteristics.

Current smokers were defined as those indicating that they have ever smoked 100 cigarettes and now smoke every day or some days. Menthol smokers were defined as current smokers who indicated that the brand they usually smoke is mentholated. Our analysis focused on responses to a question which asked menthol smokers: "If menthol cigarettes were

no longer sold, which of the following would you most likely do?" Response options included switch to nonmenthol cigarettes, switch to some OTP, quit smoking and not use any other product, none of the above, and don't know. We examined differences in responses by gender, race/ethnicity, age, education, income, cigarettes per day, intention to quit, menthol risk perceptions, and OTP use (i.e., cigars, smokeless tobacco, and/or hookah/water pipe). Prevalence estimates and 95% confidence limits are reported, and chi-square tests were conducted to determine statistical significance of descriptive analyses. Sample weights were applied to adjust for nonresponse and the varying probabilities of selection, and analyses were performed using SUDAAN statistical software (Research Triangle Institute, 2012), which corrects for the complex sample design.

### **RESULTS**

Approximately 24% of respondents were current smokers and 40.3% of current smokers were menthol smokers (see Table 1). Menthol use was significantly higher among younger (i.e., 18–24 years) versus older (i.e., 25–34 years) young adults (51% vs. 34.3%, p = .02) and was significantly associated with race/ethnicity (p < .0001), with prevalence highest among Black smokers (82.0%). Menthol use was also slightly higher among

**Table 1.** Prevalence of Current Smoking and Menthol Smoking Among Young Adults (Age 18–34 Years) by Gender, Race/Ethnicity, Age Group, and Education: 2011 NYAHS

|                      | Current smoking among all respondents ( $n = 2,871$ ) |             | Menthol current si |               |                      |  |
|----------------------|---|-------------|--------------------|---------------|----------------------|--|
|                      | %   | (95% CI)    | %                  | (95% CI)      | p value <sup>a</sup> |  |
| Gender               |   |             |                    |               |                      |  |
| Male                 | 26.72   | (23.5-30.2) | 38.3               | (31.2–46.1)   | .6944                |  |
| Female               | 20.87   | (17.8–24.3) | 42.9               | (34.5–51.7)   |                      |  |
| Race/ethnicity       |   |             |                    |               |                      |  |
| White                | 24.02   | (21.2-27.1) | 28.2               | (22.3-35.0)   | <.0001               |  |
| Black                | 20.04   | (14.6–26.8) | 82.0               | (67.7 - 90.8) |                      |  |
| Hispanic             | 25.74   | (19.8-32.7) | 50.2               | (35.9-64.5)   |                      |  |
| Asian                | 14.83   | (9.0-23.4)  | 49.3               | (25.7-73.2)   |                      |  |
| Other <sup>b</sup>   | 30.9  | (22.8-40.3) | 42.0               | (25.6-60.4)   |                      |  |
| Age group            |   |             |                    |               |                      |  |
| 18–24 years          | 20.3  | (17.3-23.7) | 51.0               | (42.2-59.9)   | .0231                |  |
| 25–34 years          | 26.3  | (23.2-29.7) | 34.3               | (27.9-41.4)   |                      |  |
| Education            |   |             |                    |               |                      |  |
| High school or less  | 33.3  | (29.4–37.5) | 43.4               | (36.4–50.6)   | .4802                |  |
| Some college or more | 17.8  | (15.1-20.8) | 36.8               | (28.3–46.1)   |                      |  |
| Income               |   |             |                    |               |                      |  |
| Less than \$25,000   | 32.1  | (28.1-36.5) | 41.0               | (33.1–49.5)   | .3676                |  |
| \$25,000-\$49,000    | 25.6  | (21.0-30.7) | 43.5               | (32.9-54.7)   |                      |  |
| \$50,000-\$74,999    | 21.2  | (15.6–28.2) | 26.6               | (15.7–41.4)   |                      |  |
| \$75,000 or more     | 10.9  | (7.1-16.3)  | 30.5               | (15.6–51.0)   |                      |  |
| Region               |   |             |                    |               |                      |  |
| Northeast            | 16.8  | (13.5-20.7) | 35.9               | (25.8–47.4)   | .2650                |  |
| Midwest              | 30.3  | (25.8–35.2) | 40.7               | (31.8-50.2)   |                      |  |
| South                | 25.2  | (21.2-29.7) | 46.8               | (37.0-56.8)   |                      |  |
| West                 | 19.5  | (15.4–24.3) | 29.6               | (18.6–43.7)   |                      |  |
| Total                | 23.8  | (21.6-26.2) | 40.3               | (34.8–46.1)   |                      |  |

*Note.* Prevalence estimates are based on weighted analyses. NYAHS = National Young Adult Health Survey. aWald-*F* chi-square.

bIncludes American Indian/Alaskan Native, Native Hawaiian/Pacific Islander, and other groups.

# Young adults' behavioral intentions

females, those with lower education levels, and those with lower income levels versus their counterparts, although these differences were not statistically significant. Among current menthol smokers (n = 239), preferred regular brands included Newport (43.9% [95% CI = 35.0, 53.2]), Marlboro (23.1% [16.2, 32.0]), and Camel (14.8% [10.2, 20.8]) (data not in table).

When asked what they would do if menthol cigarettes were no longer sold, 64.6% of menthol smokers indicated that they would quit smoking and not use any other products, 18.0% said they would switch to nonmenthol cigarettes, and 15.7% said

they would switch to some OTP. Only 1.5% indicated that they did not know what they would do or that they would do something else (i.e., "none of the above").

Table 2 presents potential correlates associated with the three main response options, excluding the minority of respondents who indicated that they did not know what they would do or would do something else. Behavioral intention in the event of a menthol ban was significantly associated with respondent race/ethnicity (p = .02), where intention to completely quit tobacco use was most prevalent among Black menthol smokers

**Table 2.** Behavioral Intentions in the Event of a Ban on Menthol Cigarettes Among Current Young Adult (Age 18–34 Years) Menthol Smokers (n = 239): 2011 NYAHS

|                           | Quit smoking/<br>tobacco use |                            | Switch to nonmenthol cigarettes |                           | Switch to other tobacco product |             |                      |
|---------------------------|------------------------------|----------------------------|---------------------------------|---------------------------|---------------------------------|-------------|----------------------|
|                           | %                            | (95% CI)                   | %                               | (95% CI)                  | %                               | (95% CI)    | p value <sup>a</sup> |
| Gender                    |                              |                            |                                 |                           |                                 |             |                      |
| Male                      | 62.9                         | (48.5–75.2)                | 14.6                            | (9.1-22.6)                | 22.6                            | (11.5–39.5) | .1343                |
| Female                    | 69.0                         | (57.2–78.7)                | 22.7                            | (14.6–33.6)               | 8.3                             | (4.1-16.2)  |                      |
| Race                      |                              |                            |                                 | ,                         |                                 | ,           |                      |
| White                     | 63.5                         | (51.2–74.3)                | 29.1                            | (19.6–40.9)               | 7.4                             | (3.4-15.1)  | .0207                |
| Black                     | 79.3                         | (63.1–89.6)                | 12.7                            | (5.2–27.9)                | 7.9                             | (2.8–20.6)  |                      |
| Hispanic                  | 61.0                         | (36.0–81.3)                | 4.5                             | (1.6–11.9)                | 34.6                            | (15.0–61.4) |                      |
| Asian                     | 38.0                         | (12.8–71.9)                | 62.0                            | (28.2–87.2)               | 0.0                             | _           |                      |
| Other <sup>b</sup>        | 65.5                         | (34.5–87.3)                | 7.7                             | (2.1-24.0)                | 26.8                            | (8.0-60.8)  |                      |
| Age group                 |                              | (6 116 0 116)              |                                 | (=12 = 112)               |                                 | (010 0010)  |                      |
| 18–24 years               | 64.6                         | (49.1–77.6)                | 17.5                            | (10.7-27.4)               | 17.9                            | (7.5-36.9)  | .9125                |
| 25–34 years               | 66.6                         | (54.6–76.7)                | 19.1                            | (12.3–28.3)               | 14.4                            | (7.2–26.8)  | .,                   |
| Education                 | 00.0                         | (0.110 7017)               | 1,,11                           | (1210 2010)               |                                 | (7.2 20.0)  |                      |
| High school or less       | 64.8                         | (53.4–74.7)                | 19.3                            | (12.7-28.2)               | 16.0                            | (8.6–27.6)  | .9316                |
| College or more           | 67.0                         | (50.1–80.4)                | 17.1                            | (10.2–27.4)               | 15.9                            | (5.7–37.4)  | .,,,,,               |
| Income                    | 07.0                         | (30.1 00.4)                | 17.1                            | (10.2 27.4)               | 13.7                            | (3.7 37.4)  |                      |
| Less than \$25,000        | 63.4                         | (48.6–76.0)                | 14.4                            | (8.3–23.7)                | 22.2                            | (11.4–39.0) | .1483                |
| \$25,000–\$49,000         | 69.3                         | (51.3–82.9)                | 16.7                            | (8.5–30.3)                | 14.0                            | (5.0–33.6)  | .1103                |
| \$50,000-\$74,999         | 64.7                         | (38.4–84.3)                | 35.3                            | (15.7–61.6)               | 0.0                             | (3.0 33.0)  |                      |
| \$75,000 or more          | 50.6                         | (22.6–78.2)                | 40.7                            | (16.9–69.9)               | 8.7                             | (2.0-31.0)  |                      |
| Cigarette per day         | 50.0                         | (22.0 70.2)                | 40.7                            | (10.7 07.7)               | 0.7                             | (2.0 31.0)  |                      |
| 1–9                       | 77.0                         | (66.5–85.0)                | 13.6                            | (8.4–21.2)                | 9.4                             | (4.2–20.0)  | .1244                |
| 10–19                     | 66.0                         | (48.2–80.1)                | 25.7                            | (14.0–42.5)               | 8.3                             | (2.8–22.0)  | .1244                |
| 20 or more                | 44.5                         | (23.0–68.2)                | 22.5                            | (10.7–41.2)               | 33.1                            | (15.1–57.9) |                      |
| Quit attempt in last year | 44.5                         | (23.0-06.2)                | 44.3                            | (10.7–41.2)               | 33.1                            | (13.1–37.9) |                      |
| ≥1                        | 69.5                         | (56.7–79.9)                | 17.8                            | (11.3–26.8)               | 12.7                            | (5.2–28.0)  | .7040                |
| None                      | 59.8                         | (45.1–72.9)                | 18.5                            | (11.5–20.8)               | 21.7                            | (11.2–38.0) | .7040                |
| Intention to quit         | 39.6                         | (43.1-72.9)                | 10.5                            | (11.0-26.4)               | 21.7                            | (11.2–36.0) |                      |
| Next 30 days              | 60.9                         | (41.8–77.1)                | 22.2                            | (12.3–36.8)               | 16.9                            | (4.9–44.7)  | .6597                |
| Next 6 months             | 76.4                         | (63.7–85.7)                | 15.1                            | (8.3–25.8)                | 8.5                             | (3.7–18.3)  | .0391                |
| No intention of quitting  | 60.8                         | (44.2–75.2)                | 15.1                            | (9.1–26.5)                | 23.3                            | (11.2–42.2) |                      |
| Menthol harm perception   | 00.8                         | (44.2–73.2)                | 13.9                            | (9.1–20.3)                | 23.3                            | (11.2–42.2) |                      |
| Less than nonmenthol      | 87.9                         | (44.5, 09.5)               | 12.1                            | (1 5 55 5)                | 0.0                             |             | .4689                |
| Same as nonmenthol        | 70.1                         | (44.5–98.5)<br>(58.8–79.4) | 18.1                            | (1.5–55.5)<br>(11.8–26.7) | 11.8                            | (5.7–22.8)  | .4069                |
| More than nonmenthol      |                              | ,                          |                                 |                           |                                 | ,           |                      |
|                           | 60.6                         | (45.1–74.3)                | 18.4                            | (10.9–29.3)               | 21.0                            | (9.8–39.6)  |                      |
| Concurrent OTP use        | 50.5                         | (24.9. 60.7)               | 12.2                            | (6.1.02.1)                | 25.2                            | (10.1.55.7) | 0207                 |
| Current user              | 52.5                         | (34.8–69.7)                | 12.2                            | (6.1–23.1)                | 35.3                            | (19.1–55.7) | .0296                |
| Nonuser                   | 72.8                         | (63.6–80.4)                | 21.7                            | (15.1–30.2)               | 5.5                             | (2.6–11.4)  |                      |
| Total                     | 65.7                         | (56.2–74.1)                | 18.4                            | (13.3–24.8)               | 16.0                            | (9.2–26.3)  | _                    |

*Note.* Prevalence estimates are based on weighted analyses. This table excludes seven respondents who provided other (i.e., "none of the above," "don't know") responses to the question about what they would do if menthol cigarettes were no longer available. NYAHS = National Young Adult Health Survey; OTP = other tobacco products, which includes cigars, smokeless tobacco, and hookah/water pipe.

<sup>&</sup>lt;sup>a</sup>Wald-*F* chi-square.

<sup>&</sup>lt;sup>b</sup>Includes American Indian/Alaskan Native, Native Hawaiian/Pacific Islander, and other groups.

(79.3%), while the majority of Asians (62.0%) indicated they would switch to nonmenthol cigarettes. Intention to switch to another type of tobacco product in the event that menthol cigarettes were no longer sold was most prevalent among Hispanics (34.6%). Behavioral intention was also significantly associated with concurrent use of OTPs (p=.03), where intention to switch to another tobacco product in the event of a menthol ban was more prevalent among menthol smokers who indicated concurrent OTP use (35.3%) than among menthol smokers who reported no OTP use (5.5%). By gender, intention to switch to another tobacco product was more prevalent among males than females (22.6% vs. 8.3%, respectively), though this difference was not statistically significant.

Interestingly, the prevalence of intending to completely quit tobacco use in the event of a ban on menthol cigarettes was essentially equal for menthol smokers with existing plans to quit smoking in the next 30 days (60.9%) and for those with no plans to quit soon (i.e., in the next 30 days or 6 months) (60.8%). Intention to completely quit tobacco use in the event of a menthol cigarette ban was least prevalent (44.5%) among menthol smokers who smoked a pack (i.e., 20 cigarettes) or more per day.

## DISCUSSION

This study uses a novel data source to provide a current prevalence estimate of young adults' menthol cigarette use and contributes to recent research regarding menthol smokers' perceptions about what they would do if menthol cigarettes were no longer sold.

We found that nearly two thirds of young adult menthol smokers stated that they would quit smoking (and tobacco use altogether) if menthol cigarettes were banned. These rates are substantially higher than those reported in previous studies of more general adult populations (about 39%), which included older adults (Hartman, 2011; Pearson et al., 2012). Our results are also consistent with the previous studies in finding that this intention to quit was particularly prevalent among Black menthol smokers (Hartman, 2011; Pearson et al., 2012), a finding which is encouraging and noteworthy given the particularly high prevalence of menthol use among this group.

In addition, while it might intuitively be expected that stated intentions to quit smoking following a menthol ban would be greatest among smokers with existing plans to quit soon anyway (e.g., in the next 30 days), this study found that such intentions were just as high among smokers who indicated they otherwise had no plans to quit soon. This implies that a policy banning menthol cigarettes might be particularly efficient in obtaining public health benefits by motivating smokers in various stages of readiness to change to similarly quit smoking altogether. This finding also supports previous research suggesting that for many menthol smokers, what they are attracted and loyal to in terms of tobacco use are the sensory effects of menthol flavoring (e.g., its ability to reduce the perceived harshness of cigarettes) and the taste of menthol itself and that nonmenthol cigarettes may not be perceived as acceptable substitutes (Johnson, Novak, & Schoden, 2011; Kreslake, Wayne, & Connolly, 2008; Richter, Beistle, Pederson, & O'Hegarty, 2008; Tauras et al., 2010). Kreslake et al. have noted the presence of this sentiment in the tobacco industry's own consumer research. In one of the industry's studies, a participant was quoted as saying that what appeals to her in a cigarette "is the menthol in it" because she otherwise doesn't "really like cigarettes" (Sherman Group, 1976).

In contrast, this study also found that about 18% of young adults indicated that they would switch to nonmentholated cigarettes if menthols were no longer sold. While this may be seen as a potential lack of policy impact on cessation attempts, previous research has suggested that some menthol smokers view switching to a nonmenthol style (which they find less enjoyable and palatable) to be a step toward quitting (Richter et al., 2008). It is also worth considering, however, that certain cigarette products currently on the market, notably Camel's Crush style, which allows users to switch from nonmenthol to menthol cigarettes by "crushing" an enclosed menthol capsule, may be working to help expose and cultivate smokers' taste for both mentholated and nonmentholated cigarettes. These products could thus potentially make transitioning completely to nonmenthol cigarettes easier if menthols were no longer available, consequently offsetting the potential public health impact of the ban.

There are several limitations to this study, including a relatively small sample of menthol smokers for use in detailed analysis of menthol-related behavioral intentions by different subcategories. In several instances, this resulted in large variance estimates, which may have potentially limited the power to detect significant relationships between behavioral intentions and other variables of interest. Similar to the results of Pearson et al. (2012), our results might also be limited by a degree of social desirability bias, in that smokers may have provided the response they believed would be most preferred by researchers. The survey also did not provide response options about other plausible actions someone might take if menthol cigarettes were banned, such as seeking out "black market" menthol cigarettes, or possibly making "homemade" mentholated cigarettes (O'Connor, Bansal-Travers, Carter, & Cummings, 2012); however, only a very small percentage of respondents (0.1%) indicated that they might choose some other action in the event of a menthol ban. Importantly, it is also not known to what extent smokers' responses would correlate with or predict their actual behavior if menthol cigarettes were banned, particularly the intention to quit tobacco completely. As has been noted, however, if even a small percentage of all those who say they would quit tobacco actually did so following a menthol cigarette ban, numerous lives could potentially be saved (Levy et al., 2011; Pearson et al., 2012).

In conclusion, this study found that a majority of young adult menthol smokers stated they would quit smoking if menthol cigarettes were no longer sold, which builds on research finding public support for such a policy and on work modeling the actual public health impact such a ban could have. Indeed, Levy et al. (2011) estimated that more than 600,000 deaths could be averted by 2050 if a menthol ban prompted just 30% of smokers to quit and prevented 30% of those who would have become menthol smokers from initiating. Although the road to banning menthol cigarettes may be challenging both politically and legally, research supporting the public health rationale for such an action exists and continues to grow.

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## **DECLARATION OF INTERESTS**

None declared.

# REFERENCES

- Caraballo, R. S., & Asman, K. (2011). Epidemiology of menthol cigarette use in the United States. *Tobacco Induced Diseases*, 9(Suppl. 1), S1. doi:10.1186/1617-9625-9-S1-S1
- Convenience Store News. (2013). FDA decision on menthol expected soon. Retrieved April 23, 2013, from www.csnews. com/top-story-tobacco-new\_tobacco\_director\_off\_to\_promising\_start-63510.html
- Delnevo, C. D., Gundersen, D. A., Hrywna, M., Echevarria, S. E., & Steinberg, M. B. (2011). Smoking-cessation prevalence among U.S. smokers of menthol versus non-menthol cigarettes. *American Journal of Preventive Medicine*, 4, 357–365. doi:10.1016/j.amepre.2011.06.039
- Gilpin, E. A., White, V. M., & Pierce, J. P. (2005). How effective are tobacco industry bar and club marketing efforts in reaching young adults? *Tobacco Control*, 14, 186–192. doi:10.1136/tc.2004.009712
- Gundersen, D. A., ZuWallack, R. S., Dayton, J., Echeverria, S. E., & Delnevo, C. D. (2013). Assessing the feasibility and sample quality of a national random digit dial cell phone survey of young adults. *American Journal of Epidemiology*. Advance online publication. doi:10.1093/aje/kwt226
- Hartman, A. M. (2011). What menthol smokers report they would do if menthol cigarettes were no longer sold. Presented to the Tobacco Products Scientific Advisory Committee, Food & Drug Administration. Retrieved from www.fda.gov/downloads/AdvisoryCommittees/CommitteesMeetingMaterials/
  TobaccoProductsScientificAdvisoryCommittee/
  UCM240176.pdf
- Hersey, J. C., Ng, S. W., Nonnemaker, J. M., Mowery, P., Thomas, K. Y., Vilsaint, M., ... Haviland, M. L. (2006). Are menthol cigarettes a starter product for youth? *Nicotine & Tobacco Research*, *3*, 403–413. doi:10.1080/14622200600670389
- Johnson, E., Novak, S., & Schoden, J. (2011). Rates of users switching to and from menthol and non-menthol cigarettes: Topic—Answers to follow up questions. Presented to the Tobacco Products Scientific Advisory Committee, Food & Drug Administration. Retrieved from www.fda.gov/downloads/AdvisoryCommittees/CommitteesMeetingMaterials/TobaccoProductsScientificAdvisoryCommittee/UCM240158.pdf
- Kreslake, J. M., Wayne, G. F., & Connolly, G. N. (2008). The menthol smoker: Tobacco industry research on consumer sensory perception of menthol cigarettes and its role in smoking behavior. *Nicotine & Tobacco Research*, 4, 705– 715. doi:10.1080/14622200801979134

- Levy, D. T., Pearson, J. L., Villanti, A. C., Blackman, K., Vallone, D. M., Niaura, R. S., & Abrams, D. B. (2011). Modeling the future effects of a menthol ban on smoking prevalence and smoking-attributable deaths in the United States. *American Journal of Public Health*, 7, 1236–1240. doi:10.2105/AJPH.2011.300179
- Ling, P. M., & Glantz, S. A. (2002). Why and how the tobacco industry sells cigarettes to young adults: Evidence from industry documents. *American Journal of Public Health*, 6, 908–916. doi:10.2105/AJPH.92.6.908
- O'Connor, R. J., Bansal-Travers, M., Carter, L. P., & Cummings, K. M. (2012). What would menthol smokers do if menthol in cigarettes were banned? Behavioral intentions and simulated demand. *Addiction (Abingdon, England)*, 107, 1330–1338. doi:10.1111/j.1360-0443.2012.03822.x
- Pearson, J. L., Abrams, D. B., Niaura, R. S., Richardson, A., & Vallone, D. M. (2012). A ban on menthol cigarettes: Impact on public opinion and smokers' intention to quit. *American Journal of Public Health*, 11, e107–e114. doi:10.2105/AJPH.2012.300804
- Research Triangle Institute. (2012). SUDAAN language manual, volumes 1 and 2, release 11. Research Triangle Park, NC: Research Triangle Institute.
- Richter, P., Beistle, D., Pederson, L., & O'Hegarty, M. (2008). Small-group discussions on menthol cigarettes: Listening to adult African American smokers in Atlanta, Georgia. *Ethnicity* & *Health*, 2, 171–182. doi:10.1080/13557850701784694
- Sherman Group. (1976). Insights into Newport: An exploratory study in brand perceptions. R.J. Reynolds. Bates No.501454142/501454166. Retrieved November 5, 2013, from http://legacy.library.ucsf.edu/tid/fcb49d00/pdf?search=%22501454142%22
- Tauras, J. A., Levy, D., Chaloupka, F. J., Villanti, A., Niaura, R. S., Vallone, D., & Abrams, D. B. (2010). Menthol and non-menthol smoking: The impact of prices and smoke-free air laws. *Addiction*, 105(Suppl. 1), 115–123. doi:10.1111/j.1360-0443.2010.03206.x
- Tobacco Control Legal Consortium. (2013). Citizen petition asking the U.S. Food & Drug Administration to prohibit menthol as a characterizing flavor in cigarettes. Retrieved November 5, 2013, from http://publichealthlawcenter.org/sites/default/files/tclc-fdacitizenpetition-menthol-2013.pdf
- Villanti, A. C., Giovino, G. A., Barker, D. C., Mowery, P. D., Sevilimedu, V., & Abrams, D. B. (2012). Menthol brand switching among adolescents and young adults in the National Youth Smoking Cessation Survey. *American Journal of Public Health*, 7, 1310–1312. doi:10.2105/AJPH.2011.300632
- Winickoff, J. P., McMillen, R. C., Vallone, D. M., Pearson, J. L., Tanski, S. E., Dempsey, J. H., ... Abrams, D. (2011). US attitudes about banning menthol in cigarettes: Results from a nationally representative survey. *American Journal of Public Health*, 7, 1234–1236. doi:10.2105/AJPH.2011.300146