Public Support for Mandated Nicotine Reduction in Cigarettes

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Cigarettes deliver pulmonary nicotine rapidly and efficiently and are the most addictive and deadly type of tobacco product.[1,2] Nicotine dependence of varying degrees underlies the 19.8% of Americans who continue to smoke,[3,4] 90% of whom began smoking before age 18 years.[4] Major US tobacco companies intentionally manipulated their products' nicotine levels to encourage initiation and discourage cessation;[5] this motivated the US Food and Drug Administration's (FDA's) initial attempt to regulate cigarettes as drug delivery devices in the 1990s.[6]

In 2009, the Family Smoking Prevention and Tobacco Control Act granted the FDA authority to regulate tobacco products.[7] Section 907 of the act allowed the FDA to promulgate tobacco product standards, including reducing nicotine to nonaddictive levels but not zero.[7] First suggested by Benowitz and Henningfield,[8] a nationwide nicotine content reduction strategy could reduce tobacco's toll on society by rendering cigarettes easier to quit and reducing youth uptake and progression to nicotine dependence.[8,9] Any proposed mandated reduction in cigarette nicotine content will require both pre- and post-implementation education and surveillance efforts to ensure that the public is effectively informed about the policy change.

Previous research assessing public sentiment surrounding tobacco control policies has predominantly focused on support for smoke-free indoor air laws, tobacco tax increases, and restrictions on tobacco advertising. In general, women, African Americans, older individuals, and college-educated adults are most supportive of tobacco control policies.[10–12] Smokers are less supportive of tobacco control policies than nonsmokers,[11,13–15] with support inversely related to how heavily they smoke.[10]

Few studies have examined public support for FDA-mandated nicotine reduction. In a random-digit dial survey of 672 smokers, Fix et al. found that 67% of smokers would support an FDA regulation that made cigarettes less addictive if "nicotine was made easily available in non-cigarette form."[16(p945)] Further data on support by demographic or other characteristics were not presented. A random-digit dial survey of 1021 individuals by Connolly et al. found that 65% of Americans (73% of nonsmokers and 58% of smokers) supported a mandated reduction in cigarette nicotine content "if it would cause fewer kids to become addicted or hooked on smoking."[17(p2)] As in previous research on public support of tobacco control policies, Connolly et al. found that a greater proportion of African Americans than Whites supported nicotine reduction. They found no differences by gender or age, and data on support by education were not presented.

Because of differences in survey item phrasing, the use of random-digit dial sample frames, and the potential role of nonresponse bias, comparisons between these studies are challenging. In some cases, small sample sizes, especially of smokers, may have precluded the authors from reporting on key subpopulations of interest, such as racial/ethnic minorities or individuals of low socioeconomic status. In the current study, we assessed public attitudes concerning a proposed mandated reduction in cigarette nicotine content in a large, nationally representative sample, with special attention paid to smoking status, intention to quit, race/ethnicity, and education. Improving on the methods used in previous studies, we collected our sample by means of address-based sampling, the gold standard of survey research.[18] Our oversampling of African Americans (n = 298), Hispanics (n = 288), and current smokers (n = 1308) allowed for more in-depth subgroup analyses than previously published studies. Additionally, we assessed the potential role of political ideology in support of FDA regulation of nicotine, a variable that has been overlooked in previous research and may affect the observed association between demographic characteristics and support for nicotine regulation. Measuring public support and opposition to reducing cigarette nicotine content and identifying characteristics of groups with an especially high likelihood of opposition will allow FDA to gauge public sentiment and tailor messaging if the agency chooses to move forward with this far-reaching regulation.

Objectives. We assessed public support for a potential Food and Drug Administration (FDA)–mandated reduction in cigarette nicotine content.

Methods. We used nationally representative data from a June 2010 cross-sectional survey of US adults (n = 2649) to obtain weighted point estimates and correlates of support for mandated nicotine reduction. We also assessed the potential role of political ideology in support of FDA regulation of nicotine.

Results. Nearly 50% of the public supported mandated cigarette nicotine reduction, with another 28% having no strong opinion concerning this potential FDA regulation. Support for nicotine reduction was highest among Hispanics, African Americans, and those with less than a high school education. Among smokers, the odds of supporting FDA nicotine regulation were 2.77 times higher among smokers who intended to quit in the next 6 months than among those with no plans to quit.

Conclusions. Mandating nicotine reduction in cigarettes to nonaddictive levels may reduce youth initiation and facilitate adult cessation. The reasons behind nicotine regulation need to be communicated to the public to preempt tobacco industry efforts to impede such a regulation. (*Am J Public Health.* 2013;103: 562–567. doi:10.2105/AJPH.2012.300890)

METHODS

In June 2010, we obtained data from a cross-sectional survey drawn from Knowledge Networks' KnowledgePanel, a nationally representative online cohort of adults aged 18 years and older. KnowledgePanel is a probability-based online research cohort that covers the US noninstitutionalized adult population both with and without Internet access. Cohort members are recruited primarily by means of address-based sampling, although some cohort members who were recruited during earlier efforts with random-digit dial sampling remain. Nonselected individuals are not able to volunteer for KnowledgePanel. To address the bias associated with Web-based data collection, members who do not have access to the Internet are given a computer with Internet access. All new members complete a separate profile survey that collects demographic information to determine eligibility for substudies and statistical weighting. This information is updated annually, with members typically active for 3 years. Cohort members are rewarded for completing surveys with points that are redeemable for cash or with access to the Internet if it is not already available.

For this survey, we randomly sampled panel members from the KnowledgePanel participant list, oversampling African Americans and Hispanics. Overall, 10 537 panel members were contacted for participation, of which 6792 (64.5%) completed the screening confirming smoking status. Of the total number of cohort members contacted for participation, response rates were highest for non-Hispanic Whites (69.2%), followed by Hispanics (53.7%) and African Americans (50.1%).[19] The completers included 1308 smokers, 5479 former and never smokers, and 5 respondents who could not be classified because they did not answer the smoking status screening item. To collect a large sample of current smokers, we invited all confirmed smokers and approximately 20% of former and never smokers selected at random (n = 1341, or 24% of those approached) to complete the full survey, yielding a final sample size of 2649 participants.

Measures

The dependent variable, support for mandated reductions in cigarette nicotine content, read:

Please tell us if you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with the following statement (or do not know): The government should reduce the amount of nicotine in cigarettes to help smokers quit.

Smoking status was self-reported, with never smokers classified as having never smoked as many as 100 cigarettes in their lives, former smokers as having smoked 100 cigarettes or more in their lives but currently smoking not at all, and current smokers having smoked in excess of 100 cigarettes in their lifetimes and currently smoking every day or some days. Smokers also provided information on intention to quit, a common outcome in smoking cessation research derived from the stage of change model,[20] and time to first cigarette on waking, a 1-item indicator of level of nicotine dependence.[21] Both items' wording was taken from the 2010 Tobacco Use Supplement to the Current Population Survey.[22,23] Our single-item measure of political ideology was adapted from an item used by the Pew Research Center and measured on an 11-point scale, with 0 = very liberal and 10 = very conservative.[24] All participants provided demographic information such as gender, age, education, and race/ethnicity.

Data Analysis

The dataset contained few missing data. Items with missing observations included political ideology (56 of 2469), intention to quit smoking (10 of 1308), and time to smoke on waking (5 of 1308). Because these variables were missing data at a rate of 2% or less and were correlated with all other variables in the analyses at less than 5%, we treated them as missing at random.[25,26] This low level of missing data may be the result of the construction of the Knowledge Networks' online survey, which does not allow participants to proceed to the next question without answering the current item. Participants could refuse to answer an item, which was treated as missing. We also conducted a sensitivity analysis to ascertain any bias associated with participants quickly clicking through the items and neglecting to read the questions carefully. Removing participants who took 7 minutes or less (median = 15 minutes) to complete the survey did not alter results; thus, we retained them for statistical analysis.

Using Stata 12 (StataCorp LP, College Station, TX),[27] we conducted a weighted analysis to obtain demographic and point estimates for support of mandated reductions in cigarette nicotine content. The sample was analyzed using design-based population weights that adjust for the probability of selection into the sample. Because Knowledge Networks includes basic demographic data for all panel members, we corrected for nonresponse bias with weighting. Weights were further constructed to reflect the 2009 US national population demographic characteristics according to the Current Population Survey.[22] Dependent variable responses were collapsed from a 5-point Likert scale into *approve, neither approve nor disapprove, disapprove,* and *don't know.* We used multinomial logistic regression to investigate outcome variables in univariate and multivariate analyses. Covariates included demographics, smoking status, and political ideology for the total population analyses and demographics, smoking status, political ideology, intention to quit, and time to first cigarette among smokers only. Although we considered combining the "don't know" response category with the "neither agree nor disagree" response category, a Small–Hsiao test of the independence of irrelevant alternatives assumption indicated that "don't know" was significantly different from the other categories in both the total and the smoker-only samples.[28] This result informed our choice of a less statistically powerful but better fitting multinomial logistic regression model. Models were constructed using likelihood ratio tests and the comparison of fit statistics without weights. Weights were added during the interpretation phase.

RESULTS

Table 1 presents unweighted and weighted sample characteristics for the total population and by smoking status. After weighting, sample demographic characteristics mirrored national estimates on gender, smoking status, race/ethnicity, education, and political ideology.[22,25] More than 60% of smokers were thinking of quitting in the next 1 to 6 months, and 20.5% (95% confidence interval [CI] = 17.4, 23.5) smoked within 5 minutes of waking. Nearly half (46.7%; 95% CI = 43.6, 49.7) of participants agreed that the government should

TABLE 1—Unweighted and Weighted Sample Characteristics Presented by Total (n = 2649) and by Never (n = 680), Former (n = 661), and Current (n = 1308) Smoking Status: June 2010

	Total Population		By Smoking Status		
Characteristic	Mean (95% CI) or Unweighted % (No.)	% Sample Weighted (95% CI)	Never Smokers, % Sample Weighted (95% CI)	Former Smokers, % Sample Weighted (95% CI)	Current Smokers, % Sample Weighted (95% CI)
Gender					
Male	49.9 (1323)	48.4 (45.4, 51.4)	47.3 (42.4, 52.2)	51.2 (46.3, 56.8)	47.2 (43.5, 51.0)
Female	50.1 (1326)	51.6 (48.6, 54.6)	52.7 (47.8, 57.6)	48.4 (46.3, 55.8)	52.8 (49.0, 56.5)
Smoking status					
Never	25.7 (680)	52.5 (49.5, 55.4)	100	. . .	. . .
Former	25.0 (661)	25.4 (23.0, 27.8)	. . .	100	. . .
Current	49.3 (1308)	22.2 (20.3, 24.0)	. . .	. . .	100
Race/ethnicity					
White	71.8 (1902)	69.0 (66.1, 72.0)	67.9 (63.0, 72.7)	77.1 (72.1, 82.0)	62.6 (58.7, 66.5)
African American	11.3 (298)	11.4 (9.2, 13.5)	12.2 (8.7, 15.7)	7.8 (4.5, 11.1)	13.6 (10.8, 16.4)
Hispanic	10.9 (288)	12.9 (10.7, 15.2)	12.4 (8.8, 16.0)	9.5 (5.8, 13.1)	18.0 (14.5, 21.5)
Other	6.1 (161)	6.7 (5.0, 8.4)	7.5 (4.6, 10.4)	5.7 (3.1, 8.2)	5.8 (4.0, 7.6)
Age, y	49.1 (48.4, 49.7)	46.4 (45.4, 47.4)	42.7 (41.2, 44.3)	55.2 (53.5, 56.9)	44.9 (43.8, 46.1)
Education					
< high school	12.8 (338)	13.1 (11.0, 15.1)	8.4 (5.3, 11.6)	13.8 (10.0, 17.6)	23.1 (19.5, 26.8)
High school diploma/GED	32.5 (861)	31.0 (28.2, 33.8)	26.7 (22.3, 31.1)	37.1 (31.9, 42.2)	34.3 (30.8, 37.8)
Some college	29.8 (789)	28.3 (25.7, 31.0)	29.1 (24.8, 33.5)	24.6 (20.1, 29.1)	30.7 (27.4, 33.9)
College degree	25.0 (661)	27.6 (24.9, 30.3)	35.7 (31.3, 40.3)	24.5 (20.3, 28.7)	11.9 (9.9, 14.0)
Political ideology[a]	6.5 (6.4, 6.6)	6.6 (6.4, 6.7)	6.7 (6.5, 6.9)	6.7 (6.4, 7.0)	6.1 (6.0, 6.3)
Government should regulate nicotine[b]					
Agree	44.7 (1165)	46.7 (43.6, 49.7)	46.2 (41.3, 51.1)	48.5 (43.2, 53.9)	45.5 (41.8, 49.3)
Neither agree nor disagree	27.8 (725)	26.8 (24.2, 29.5)	26.3 (22.0, 30.6)	28.0 (23.3, 32.8)	26.8 (23.5, 30.0)
Disagree	20.4 (531)	16.5 (14.4, 18.6)	13.8 (10.5, 17.1)	16.4 (12.9, 19.9)	23.0 (19.9, 26.1)
Don't know	7.2 (187)	10.0 (8.0, 12.0)	13.7 (10.2, 17.2)	7.0 (4.4, 9.6)	4.7 (3.2, 6.2)
Intention to quit					
Next 30 d	. . .	. . .	. . .	. . .	18.3 (15.5, 21.2)
Next 6 mo	. . .	. . .	. . .	. . .	45.7 (42.0, 49.4)
Not thinking of quitting	. . .	. . .	. . .	. . .	35.9 (32.4, 39.5)
Time to smoke on waking	. . .	. . .	. . .	. . .	
≥ 6 min	. . .	. . .	. . .	. . .	79.5 (76.5, 82.6)
Within 5 min	. . .	. . .	. . .	. . .	20.5 (17.4, 23.5)

Note. CI = confidence interval; GED = general equivalency diploma.
[a]Political ideology was measured on a scale ranging from 0 to 10, with 0 = *very liberal* and 10 = *very conservative*.
[b]"The government should reduce the amount of nicotine in cigarettes to help smokers quit."

regulate nicotine, and 26.8% (95% CI = 24.2, 29.5) neither agreed nor disagreed, 16.5% (95% CI = 14.4, 18.6) disagreed, and 10% (95% CI = 8.0, 12.0) did not know.

Support for Nicotine Regulation in the Total Population

The proportion of participants endorsing mandated reductions in cigarette nicotine content was consistent across smoking categories, with 46.2% (95% CI = 41.3, 51.1) of never smokers, 48.5% (95% CI = 43.3, 53.9) of former smokers, and 45.5% (95% CI = 41.8, 49.3) of current smokers supporting regulation (Table 1). Approximately 27% of never, former, and current smokers neither agreed nor disagreed with regulation. Differences between smoking categories were evident in the relatively small proportion of participants who disagreed with regulation of nicotine, with disapproval increasing from 13.8% (95% CI = 10.5, 17.1) among never smokers, to 16.4%

(95% CI = 12.9, 19.9) among former smokers, to 23.0% (95% CI = 19.9, 26.1) among current smokers. In multivariate analysis adjusted for demographic variables and political ideology, the odds of support for nicotine regulation were 60% lower among current smokers than among never smokers (Table 2).

We also examined support for nicotine regulation by racial/ethnic group. A greater percentage of African Americans (52.0%; 95% CI = 41.9, 62.2) and Hispanics (61.2%; 95%

CI = 52.3, 70.0) supported nicotine regulation than did Whites (43.3%; 95% CI = 39.9, 46.7). In multivariate analysis adjusted for other demographic variables, smoking status, and political ideology, the odds of support for nicotine regulation among African Americans (adjusted odds ratio [AOR] = 2.56; 95% CI = 1.30, 5.04) were significantly higher than the odds of support among Whites (Table 2). We did not find a statistically significant difference in support for nicotine regulation between Hispanics and Whites in multivariate regression (AOR = 1.62; 95% CI = 0.97, 2.70).

Education and political ideology were also associated with support for nicotine regulation. In univariate analysis, similar percentages of people with a college degree, some college, or a high school degree supported nicotine regulation, but support was significantly higher among those without a high school diploma (62.1%; 95% CI = 54.3, 69.8). In multivariate analysis adjusting for other demographic variables and political ideology, the odds of support were 2.26 times higher (95% CI = 1.47, 3.50)

among participants with a high school degree and 2.79 times higher (95% CI = 1.62, 4.82) among those without a high school degree than the odds of support among those with a college degree. Additionally, we found that the odds of support of versus opposition to nicotine regulation decreased by 11% with every 1-unit increase from liberal to conservative in the political ideology item (Table 2).

Support for Nicotine Regulation Among Smokers

As in the total population, race/ethnicity was significantly associated with support for nicotine reduction, with the odds of support among African Americans 2.22 times (95% CI = 1.78, 4.31) higher than the odds of support for otherwise similar White smokers (Table 2). We found no difference in support between Hispanics and Whites in the multivariate regression. Education was inversely related to support for nicotine reduction among smokers, with the odds of support 1.98 times higher (95% CI = 1.09, 3.61) among those with a high

school degree and 2.45 times higher (95% CI = 1.23, 4.87) among those without a high school degree than the odds of support among college graduates.

In addition to race and education, intention to quit was associated with support for mandated reductions in cigarette nicotine levels. In multivariate analysis, the odds of support were significantly higher for smokers with plans to quit in the next 6 months (AOR = 2.77; 95% CI = 1.78, 4.31) or next 30 days (AOR = 2.52; 95% CI = 1.38, 4.59) than those not thinking of quitting. We examined time to first cigarette on waking and political ideology, but they were not significant in univariate or multivariate analysis among current smokers only.

DISCUSSION

Our findings show that nearly half of the US public supports FDA-mandated reductions in nicotine in cigarettes and that this level of support is consistent among never, former, and current smokers. Overall, only 16% of Americans disagreed with an FDA-mandated reduction in cigarette nicotine content. An additional 28% of respondents did not feel strongly either way, and 10% did not know how they felt. This 38% of undecided Americans may be receptive to education on how nicotine regulation could prevent uptake and facilitate cessation or may be persuaded to oppose regulation by so-called "smokers' rights" campaigns and other tobacco industry efforts.

Consistent with previous research on public support for tobacco control policies,[10,15,17,29,30] we found that racial/ethnic minorities, especially African Americans, are more supportive of mandated reductions in cigarette nicotine content than Whites. However, contrary to previous research demonstrating an association between support for tobacco control policies and increasing education, our research has shown that those with less than a high school education are more supportive of FDA nicotine regulation than those with a college degree, thus echoing trends found in previous research on FDA regulation of nicotine and menthol.[15,17] We speculate that support for FDA regulation of cigarettes among racial/ethnic minorities and individuals of low socioeconomic status reveals an awareness of tobacco's impact on their lives. Indeed, smoking-attributable disease

TABLE 2—Results of a Multinomial Logistic Regression for Support of FDA-Mandated Nicotine Reduction in Which *Disagree* Is the Base Outcome for the Total Population and Among Smokers Only: June 2010

Variable	Total Population		Smokers Only	
	AOR (95% CI)	P	AOR (95% CI)	P
Female (Ref = male)	1.36 (0.97, 1.90)	.07	1.03 (0.69, 1.53)	.9
Smoking status (Ref = never)				
Former	0.82 (0.53, 1.25)	.35	. . .	. . .
Current	0.40 (0.28, 0.57)	<.001	. . .	. . .
Political ideology	0.89 (0.82, 0.95)	.02	. . .	. . .
Race/ethnicity (Ref = White)				
African American	2.56 (1.30, 5.04)	.01	2.22 (1.78, 4.31)	<.001
Hispanic	1.62 (0.97, 2.70)	.07	1.07 (0.60, 1.92)	.82
Other	1.30 (0.56, 2.99)	.55	1.55 (0.61, 3.93)	.35
Age	1.00 (0.99, 1.01)	.98	1.01 (0.99, 1.01)	.14
Education (Ref = college degree)				
Some college	1.41 (0.91, 2.19)	.12	1.45 (0.81, 2.60)	.22
High school degree	2.26 (1.47, 3.50)	<.001	1.98 (1.09, 3.61)	.03
< high school	2.79 (1.62, 4.82)	<.001	2.45 (1.23, 4.87)	.01
Intention to quit				
Next 6 mo	. . .	. . .	2.77 (1.78, 4.31)	<.001
Next 30 d	. . .	. . .	2.52 (1.38, 4.59)	<.001

Note. AOR = adjusted odds ratio; CI = confidence interval. Multinomial logistic regressions return relative risk ratios but may be interpreted as odds ratios in this case. Political ideology was measured on a scale ranging from 0–10, with 0 = *very liberal* and 10 = *very conservative*.

reflects a socioeconomic gradient such that those with the least resources are most likely to smoke, less likely to quit, and experience higher rates of morbidity and mortality from tobacco use.[31] On a broader level, individuals' perceived ability to influence their lives varies by social class and social capital. Perhaps this perceived lack of power translates into more support for federal regulation of tobacco products among members of marginalized groups.

Our research found a lower level of outright support for mandated nicotine reduction (48%) than Fix et al.[16] (67% among smokers) or Connolly et al.[17] (65% in general population), which could be the result of several factors. First, none of the previous studies included a "neither agree nor disagree" category. Because nicotine regulation is a new topic and respondents were unlikely to have a formed a firm opinion about such a regulation, we felt that it was important to offer a neutral response choice in this research. Indeed, nearly 27% of our respondents chose this option, suggesting that the lack of a neutral response could have inflated levels of agreement in previous investigations of this topic. Second, it is possible that sampling bias may underlie the different estimates of support found in the random-digit dial studies and the current research, in which we used address-based sampling, the gold standard in survey research.[18] Finally, differences in item phrasing and ordering, as well as a lack of information on nonresponse bias, make comparisons between the current research and past studies challenging. Considering these studies' significant methodological differences, it is perhaps most useful to think of their different estimates as a range, with the current research representing a low-end estimate of support and previous studies representing a high-end estimate of support for FDA-mandated reductions in cigarette nicotine content.

Smokers intending to quit were more likely to support FDA-mandated reductions in cigarette nicotine content than smokers not considering cessation. Although previous research has found that heavy smokers are less supportive of tobacco control policies than light smokers,[11] we found no differences in support by time to first cigarette of the day,[21] a well-established measure of nicotine dependence. These findings could be in part because of the wording of the question, which highlighted nicotine reduction as a mechanism "to help smokers quit." As posited in previous research, it could also signify smokers' support of tobacco regulations as enabling free choice concerning tobacco use.[16]

Although political ideology is not a standard independent variable in health research, we included it because of the inherently political nature of our question (support for a potentially controversial government regulation). Evidence has indicated that conservatives are less supportive of government regulation than liberals and that people identifying as liberal are more likely to be female or racial/ethnic minorities.[25] As expected, we found that increasing conservatism was inversely associated with support for nicotine regulation. In the total population, we also found an enduring association between African American race and support for nicotine regulation, suggesting that support of this regulation goes beyond political ideology.

Strengths and Limitations

As with many surveys in the new information and communications era of smartphones and the Internet, our sample may be less representative of people of low socioeconomic status, low reading levels, or those without a permanent home. However, Knowledge Networks uses address-based sampling to increase its coverage of cell-phone-only and minority households and provides free online access to facilitate data collection. A recent analysis comparing the Knowledge Networks panel with national data did not reveal significant sources of nonresponse bias by gender, age, race, educational attainment, home ownership, household income, number of adults in the household, or region.[31]

Another limitation in interpreting the findings is the role of the social desirability response bias. As in other studies of public opinion of FDA regulation of tobacco,[16,17] participants may have reported more favorable opinions of government regulation of nicotine because of the stigma associated with tobacco use, possibly inflating estimates of support for nicotine regulation. Social desirability bias may also have attenuated the association between race/ethnicity, education, and support for nicotine regulation, because research has shown that stigma associated with smoking is most likely felt by Whites and those with higher levels of education.[33] Surveys administered over the Internet are, however, less likely to elicit socially desirable answers from participants;[34] thus, the online mode used in this research is less likely than telephone surveys used in other previously published studies to elicit social desirability bias.

Although African Americans and Hispanics were oversampled, our sample included smaller numbers of individuals in each of these racial/ethnic groups than of Whites. Nonetheless, our findings are drawn from the largest sample published to date, including more than 1300 current smokers and more than 660 former and never smokers, respectively. Our large sample allowed for the first investigation of support for nicotine regulation by education and an in-depth analysis of the correlates of support among smokers only. Moreover, the trends in support of nicotine regulation found in this analysis are consistent with trends related to support for the elimination of menthol in cigarettes.[15]

Conclusion

This study provides initial information about the public's attitude and their likely support of what could be one of the most far-reaching actions of the FDA's new regulatory authority: a mandated reduction in cigarette nicotine levels to nonaddictive levels. The amount of overall support, especially among current smokers, African Americans, smokers wanting to quit, and those with less than a high school education, has indicated that FDA-mandated nicotine reduction under Section 907 of the Family Smoking Prevention and Tobacco Control Act may be acceptable to a large number of Americans. More research and ongoing surveillance will be needed to examine potential mediators and moderators of public attitudes and to monitor public knowledge, attitudes, and beliefs related to FDA-mandated nicotine regulation as FDA policy implementation evolves. Given that a large proportion of the population is undecided, considering timely educational campaigns to frame the debate is critical. The reasons behind nicotine regulation need to be communicated to this group of "undecideds" to preempt tobacco industry efforts to impede such a regulation, as has already occurred with the debate over a menthol ban.[35–39] Use of combusted tobacco products remains the most

preventable cause of death, disease burden, and excess cost in the United States.[2] Nicotine reduction is a promising device in the FDA's tool kit to protect the population from the harm and death caused by tobacco products. ∎

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This article was accepted May 2, 2012.

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