

# 2003 N.C. Youth Tobacco Survey Results

## Current Tobacco Use Among Middle and High School Students—North Carolina, 2003

### Background

Each day in the United States, approximately 4,400 youths aged 12-17 try their first cigarette.<sup>1</sup> An estimated one third of these young smokers are expected to die from a smoking-related disease.<sup>2</sup> The North Carolina Youth Tobacco Survey (YTS), conducted by the N.C. Tobacco Prevention and Control Branch and Department of Public Instruction, provides estimates of usage among middle and high school students for various tobacco products (i.e., cigarettes, cigars, smokeless tobacco, pipes and bidis [leaf wrapped, flavored cigarettes from India]). This report summarizes tobacco use prevalence estimates from the 2003 NC YTS and describes changes in prevalence from 2001 and 1999. Current cigarette smoking among students in middle school (i.e., grades 6—8) decreased significantly during 1999-2003; however, a decrease among students in high school (i.e., grades 9—12) was not statistically significant. The lack of progress among high school students suggests that health officials should improve implementation of proven antismoking strategies (i.e., increasing cigarette excise tax) and develop new strategies to promote continues declines in youth smoking.

### Methodology

The sampling frame for the drawn sample consisted of all public and charter schools in North Carolina. A total of 91 primary sampling units (PSUs) based on Local Education Areas (LEAs) [i.e., school districts] were selected in the first stage of sampling in three distinct geographic regions of the state (west, central and east), and 216 schools were selected from these PSUs in the second stage of sampling. Of these 216 eligible schools, 200 participated (92.6%) in the 2003 NC YTS. Classes were then randomly selected proportional to overall school enrollment for each school. Participation was voluntary and anonymous, and school parental permission procedures were followed; students recorded their responses on a computer-scannable sheets.

### Results

Among the students attending the 200 participating schools, 6,334 (83.5%) (i.e., 3,073 middle school students and 3,261 high school students) completed the survey, resulting in an overall response rate of 77.3%. Data were weighted to be representative statewide and by region. CDC and RTI International processed the data and generated basic summary data tables. Current use of a specific tobacco product was defined as having used that product on at least one occasion during the 30 days preceding the survey.

In 2003, a total of 14.3% of middle school students reported current use of a tobacco product (Table 1). Cigarettes (9.3%) were the most commonly used product, with no statistically significant differences in usage by sex. Cigars (5.4%) were the second most commonly used tobacco product, followed by smokeless tobacco (4.5%), bidis (3.0%), and pipes (2.2%). Males were more likely than females to use all products except for cigarettes. Whites (5.9%) were more likely than blacks (1.7%) to be current users of smokeless tobacco. No other statistically significant differences were found for any type of tobacco use by race/ethnicity.

Among high school students, 33.7% reported current use of a tobacco product (Table 2). Cigarettes (27.3%) were the most commonly used product, with no differences by sex; however, white students (30.8%) were more likely to use cigarettes than black (20.1%) and Hispanic (18.0%) students. Cigars (13.4%) were the second most commonly used tobacco product, followed by smokeless tobacco (9.5%), pipes (4.1%), and bidis (3.6%). Males were more likely than females to use all tobacco products except for cigarettes. Whites (37.9%) were more likely to use tobacco than black (25.5%) or Hispanic (22.6%) students. Moreover, whites (13.1%) were more likely to use smokeless tobacco than black (3.0%) and Hispanic (3.9%) students.

### Since 2001

During 2001-2003, no significant changes were found among middle school students in the prevalence of tobacco use by type of product (Table 1). Within tobacco products some differences were noted. Females decreased from 5.4% to 2.8% in cigar use and pipe use from 2.4% to 0.8%. No other significant changes

## 2003 N.C. Youth Tobacco Survey Results

among sex or race/ethnicity were found among middle school students in cigarette, smokeless tobacco, pipe or bidis use (Table 1).

During 2001-2003, no significant changes were found among high school students in the prevalence of tobacco use except bidis which decreased from 7.4% to 3.6% (Table 2). Male and female bidis use decreased from 9.9% and 4.6% in 2001 to 4.8% and 2.4% in 2003, respectively. Hispanic use of tobacco, cigarettes, smokeless tobacco and bidis all declined significantly since 2001. No other significant changes among sex or race/ethnicity were found among high school students in smokeless tobacco, pipe or bidis use (Table 2).

### Since 1999

During 1999-2003, no significant changes were found among middle school students in the prevalence of tobacco use except cigarettes (Table 3). Cigarette use among middle school students decreased from 15.0% to 9.3% overall (a 38% decrease). Cigar use among females decreased from 5.1% to 2.8% and among blacks from 9.7% to 5.5%. No other significant changes among sex or race/ethnicity were found among middle school students in smokeless tobacco, pipe or bidis use (Table 3).

During 1999-2003, no significant changes were found among high school students in the prevalence of tobacco use except cigars (Table 4). Cigar use among high school students decreased from 19.7% to 13.4% overall. Cigar use among males decreased from 26.8% to 18.5% and females from 12.5% to 8.2%. Among whites, cigar use decreased from 19.8% to 14.5% and blacks from 17.9% to 10.3%. No other significant changes among sex or race/ethnicity were found among middle school students in smokeless tobacco or pipe use (Table 4).

### References:

1. SAMHSA. National Household Survey on Drug Abuse, 2001. US DHHS, publication no. (SMA) 02-3759.
2. CDC. Projected smoking related deaths among youth. MMWR 1996;45:971-4.

# 2003 N.C. Youth Tobacco Survey Results

**Table 1. Percentage of students in middle school (i.e., grades 6—8) who were current users\* of any tobacco product, by product type, sex, and race/ethnicity—Youth Tobacco Survey, North Carolina, 2003 and 2001**

Characteristic	Any tobacco+		Cigarettes		Cigars		Smokeless tobacco		Pipes		Bidis	
	%	(95% CI) <sup>§</sup>	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
<b>Middle school, 2003</b>												
<b>Sex</b>												
Male	17.4	(±3.1)	9.8	(±1.8)	7.9	(±1.8)	7.2	(±1.7)	3.6	(±1.3)	4.4	(±1.6)
Female	11.0	(±2.2)	8.9	(±2.1)	2.8	(±1.1)	1.5	(±0.7)	0.8	(±0.5)	1.6	(±0.9)
<b>Race/Ethnicity</b>												
White	14.1	(±2.7)	9.1	(±2.2)	5.2	(±1.3)	5.9	(±1.3)	2.2	(±0.7)	2.2	(±1.1)
Black	13.7	(±3.7)	8.8	(±2.4)	5.5	(±2.5)	1.7	(±1.2)	2.1	(±1.2)	3.7	(±2.1)
Hispanic	17.7	(±9.9)	13.5	(±9.7)	6.7	(±6.3)	5.7	(±5.9)	2.9	(±4.0)	5.0	(±5.3)
<b>Total</b>	<b>14.3</b>	<b>(±2.4)</b>	<b>9.3</b>	<b>(±1.6)</b>	<b>5.4</b>	<b>(±1.2)</b>	<b>4.5</b>	<b>(±1.0)</b>	<b>2.2</b>	<b>(±0.7)</b>	<b>3.0</b>	<b>(±1.1)</b>
<b>Middle School, 2001</b>												
<b>Sex</b>												
Male	18.3	(±2.7)	10.5	(±1.8)	8.3	(±1.7)	5.7	(±1.4)	4.6	(±1.8)	5.1	(±1.2)
Female	15.9	(±2.7)	11.8	(±2.4)	5.4	(±1.5)	2.3	(±0.9)	2.4	(±0.9)	3.3	(±1.0)
<b>Race/Ethnicity</b>												
White	15.6	(±3.3)	10.4	(±2.5)	5.7	(±1.9)	4.3	(±1.2)	3.1	(±1.0)	2.9	(±1.0)
Black	18.0	(±2.7)	10.7	(±2.2)	8.0	(±2.1)	3.5	(±1.2)	3.2	(±1.4)	5.4	(±5.4)
Hispanic	15.6	(±5.8)	9.5	(±5.5)	7.3	(±4.6)	3.7	(±2.0)	5.3	(±3.6)	5.0	(±3.7)
<b>Total</b>	<b>17.4</b>	<b>(±2.6)</b>	<b>11.3</b>	<b>(±1.9)</b>	<b>7.1</b>	<b>(±1.5)</b>	<b>4.1</b>	<b>(±1.0)</b>	<b>3.7</b>	<b>(±1.1)</b>	<b>4.5</b>	<b>(±0.9)</b>

\* Used tobacco on at least one occasion during the 30 days preceding the survey.

+ Cigarettes, cigars, smokeless tobacco, pipes, or bidis (leaf-wrapped, flavored cigarettes from India).

§ Confidence interval.

**Table 2. Percentage of students in high school (i.e., grades 9—12) who were current users\* of any tobacco product, by product type, sex, and race/ethnicity—Youth Tobacco Survey, North Carolina, 2003 and 2001**

Characteristic	Any tobacco+		Cigarettes		Cigars		Smokeless tobacco		Pipes		Bidis	
	%	(95% CI) <sup>§</sup>	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
<b>High school, 2003</b>												
<b>Sex</b>												
Male	39.2	(±4.0)	28.7	(±3.8)	18.5	(±2.9)	17.3	(±4.2)	6.6	(±1.6)	4.8	(±1.2)
Female	27.9	(±3.9)	25.7	(±3.9)	8.2	(±1.9)	1.8	(±0.7)	1.5	(±0.9)	2.4	(±1.1)
<b>Race/Ethnicity</b>												
White	37.9	(±4.5)	30.8	(±4.3)	14.5	(±2.8)	13.1	(±2.9)	4.4	(±1.4)	3.9	(±1.1)
Black	25.5	(±5.1)	20.1	(±3.6)	10.3	(±3.4)	3.0	(±2.2)	2.9	(±1.5)	2.7	(±1.4)
Hispanic	22.6	(±7.5)	18.0	(±6.6)	12.9	(±5.2)	3.9	(±3.2)	6.1	(±4.8)	3.0	(±2.9)
<b>Total</b>	<b>33.7</b>	<b>(±3.6)</b>	<b>27.3</b>	<b>(±3.3)</b>	<b>13.4</b>	<b>(±2.1)</b>	<b>9.5</b>	<b>(±2.3)</b>	<b>4.1</b>	<b>(±1.1)</b>	<b>3.6</b>	<b>(±0.8)</b>
<b>High school, 2001</b>												
<b>Sex</b>												
Male	42.3	(±4.7)	29.8	(±4.6)	22.5	(±3.8)	15.2	(±2.6)	8.2	(±2.0)	9.9	(±2.3)
Female	29.0	(±2.3)	25.7	(±2.6)	10.1	(±1.3)	2.5	(±0.5)	3.5	(±1.4)	4.6	(±1.5)
<b>Race/Ethnicity</b>												
White	37.4	(±4.1)	30.5	(±3.8)	15.3	(±2.7)	10.7	(±1.9)	4.3	(±0.9)	5.0	(±1.4)
Black	28.2	(±4.3)	18.1	(±4.2)	14.8	(±2.5)	3.6	(±1.7)	5.8	(±2.5)	9.7	(±4.1)
Hispanic	38.3	(±5.9)	30.2	(±5.1)	19.3	(±6.1)	11.5	(±3.4)	10.6	(±4.2)	13.0	(±4.9)
<b>Total</b>	<b>35.8</b>	<b>(±3.3)</b>	<b>27.8</b>	<b>(±3.5)</b>	<b>16.4</b>	<b>(±2.1)</b>	<b>8.9</b>	<b>(±1.4)</b>	<b>5.9</b>	<b>(±1.3)</b>	<b>7.4</b>	<b>(±1.8)</b>

\* Used tobacco on at least one occasion during the 30 days preceding the survey.

+ Cigarettes, cigars, smokeless tobacco, pipes, or bidis (leaf-wrapped, flavored cigarettes from India).

§ Confidence interval.

## 2003 N.C. Youth Tobacco Survey Results

**Table 3. Percentage of students in middle school (i.e., grades 6—8) who were current users\* of any tobacco product, by product type, sex, and race/ethnicity—Youth Tobacco Survey, North Carolina, 2003 and 1999**

Characteristic	Any tobacco		Cigarettes		Cigars		Smokeless tobacco		Pipes		Bidis	
	%	(95% CI) §	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
<b>Middle school, 2003</b>												
<b>Sex</b>												
Male	17.4	(±3.1)	9.8	(±1.8)	7.9	(±1.8)	7.2	(±1.7)	3.6	(±1.3)	4.4	(±1.6)
Female	11.0	(±2.2)	8.9	(±2.1)	2.8	(±1.1)	1.5	(±0.7)	0.8	(±0.5)	1.6	(±0.9)
<b>Race/Ethnicity</b>												
White	14.1	(±2.7)	9.1	(±2.2)	5.2	(±1.3)	5.9	(±1.3)	2.2	(±0.7)	2.2	(±1.1)
Black	13.7	(±3.7)	8.8	(±2.4)	5.5	(±2.5)	1.7	(±1.2)	2.1	(±1.2)	3.7	(±2.1)
Hispanic	17.7	(±9.9)	13.5	(±3.6)	6.7	(±6.3)	5.7	(±5.9)	2.9	(±4.0)	5.0	(±5.3)
<b>Total</b>	<b>14.3</b>	<b>(±2.4)</b>	<b>9.3</b>	<b>(±1.6)</b>	<b>5.4</b>	<b>(±1.2)</b>	<b>4.5</b>	<b>(±1.0)</b>	<b>2.2</b>	<b>(±0.7)</b>	<b>3.0</b>	<b>(±1.1)</b>
<b>Middle School, 1999</b>												
<b>Sex</b>												
Male	21.0	(±3.1)	16.0	(±2.8)	10.6	(±1.9)	6.3	(±1.6)	5.2	(±1.3)	NA	
Female	15.7	(±2.1)	14.0	(±2.1)	5.1	(±1.1)	1.4	(±0.5)	1.5	(±0.5)	NA	
<b>Race/Ethnicity</b>												
White	16.8	(±2.4)	14.1	(±2.2)	6.3	(±1.2)	4.0	(±1.1)	2.4	(±0.7)	NA	
Black	19.8	(±3.5)	15.7	(±3.5)	9.7	(±1.8)	2.6	(±1.1)	3.9	(±1.3)	NA	
Hispanic	20.5	(±4.6)	16.0	(±4.7)	9.1	(±3.3)	4.7	(±2.7)	6.1	(±2.7)	NA	
<b>Total</b>	<b>18.4</b>	<b>(±2.3)</b>	<b>15.0</b>	<b>(±2.2)</b>	<b>7.9</b>	<b>(±1.3)</b>	<b>3.9</b>	<b>(±0.9)</b>	<b>3.4</b>	<b>(±0.7)</b>	<b>NA</b>	

\* Used tobacco on at least one occasion during the 30 days preceding the survey.

+ Cigarettes, cigars, smokeless tobacco, pipes, or bidis (leaf-wrapped, flavored cigarettes from India).

§ Confidence interval.

**Table 4. Percentage of students in high school (i.e., grades 9—12) who were current users\* of any tobacco product, by product type, sex, and race/ethnicity—Youth Tobacco Survey, North Carolina, 2003 and 1999**

Characteristic	Any tobacco		Cigarettes		Cigars		Smokeless tobacco		Pipes		Bidis	
	%	(95% CI) §	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
<b>High school, 2003</b>												
<b>Sex</b>												
Male	39.2	(±4.0)	28.7	(±3.8)	18.5	(±2.9)	17.3	(±4.2)	6.6	(±1.6)	4.8	(±1.2)
Female	27.9	(±3.9)	25.7	(±3.9)	8.2	(±1.9)	1.8	(±0.7)	1.5	(±0.9)	2.4	(±1.1)
<b>Race/Ethnicity</b>												
White	37.9	(±4.5)	30.8	(±4.3)	14.5	(±2.8)	13.1	(±2.9)	4.4	(±1.4)	3.9	(±1.1)
Black	25.5	(±5.1)	20.1	(±3.6)	10.3	(±3.4)	3.0	(±2.2)	2.9	(±1.5)	2.7	(±1.4)
Hispanic	22.6	(±7.5)	18.0	(±6.6)	12.9	(±5.2)	3.9	(±3.2)	6.1	(±4.8)	3.0	(±2.9)
<b>Total</b>	<b>33.7</b>	<b>(±3.6)</b>	<b>27.3</b>	<b>(±3.3)</b>	<b>13.4</b>	<b>(±2.1)</b>	<b>9.5</b>	<b>(±2.3)</b>	<b>4.1</b>	<b>(±1.1)</b>	<b>3.6</b>	<b>(±0.8)</b>
<b>High school, 1999</b>												
<b>Sex</b>												
Male	44.0	(±2.6)	33.4	(±2.6)	26.8	(±2.0)	14.0	(±2.6)	8.7	(±1.8)	NA	
Female	32.4	(±2.6)	29.7	(±2.6)	12.5	(±1.6)	1.8	(±0.5)	1.7	(±0.7)	NA	
<b>Race/Ethnicity</b>												
White	42.5	(±2.7)	36.5	(±2.8)	19.8	(±2.2)	9.7	(±1.7)	4.6	(±1.1)	NA	
Black	28.7	(±3.5)	20.2	(±3.1)	17.9	(±2.5)	2.6	(±1.1)	3.7	(±1.3)	NA	
Hispanic	33.9	(±6.6)	26.3	(±6.0)	18.2	(±4.8)	8.7	(±4.2)	11.1	(±4.6)	NA	
<b>Total</b>	<b>38.3</b>	<b>(±2.2)</b>	<b>31.6</b>	<b>(±2.2)</b>	<b>19.7</b>	<b>(±1.5)</b>	<b>7.9</b>	<b>(±1.5)</b>	<b>5.3</b>	<b>(±1.1)</b>	<b>NA</b>	

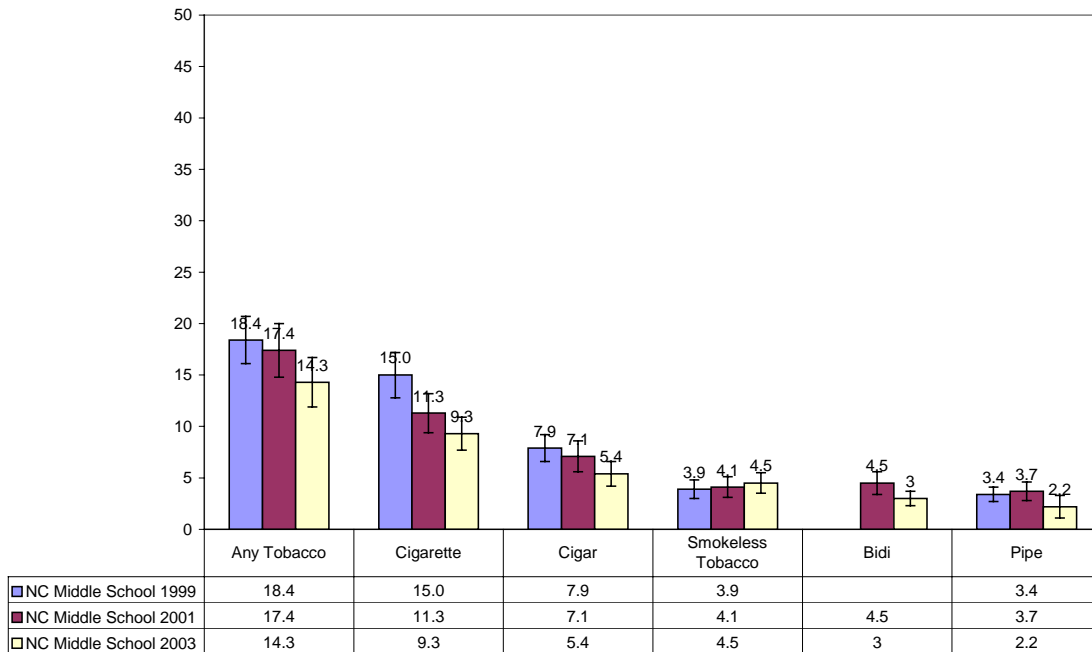
\* Used tobacco on at least one occasion during the 30 days preceding the survey.

+ Cigarettes, cigars, smokeless tobacco, pipes, or bidis (leaf-wrapped, flavored cigarettes from India).

§ Confidence interval.

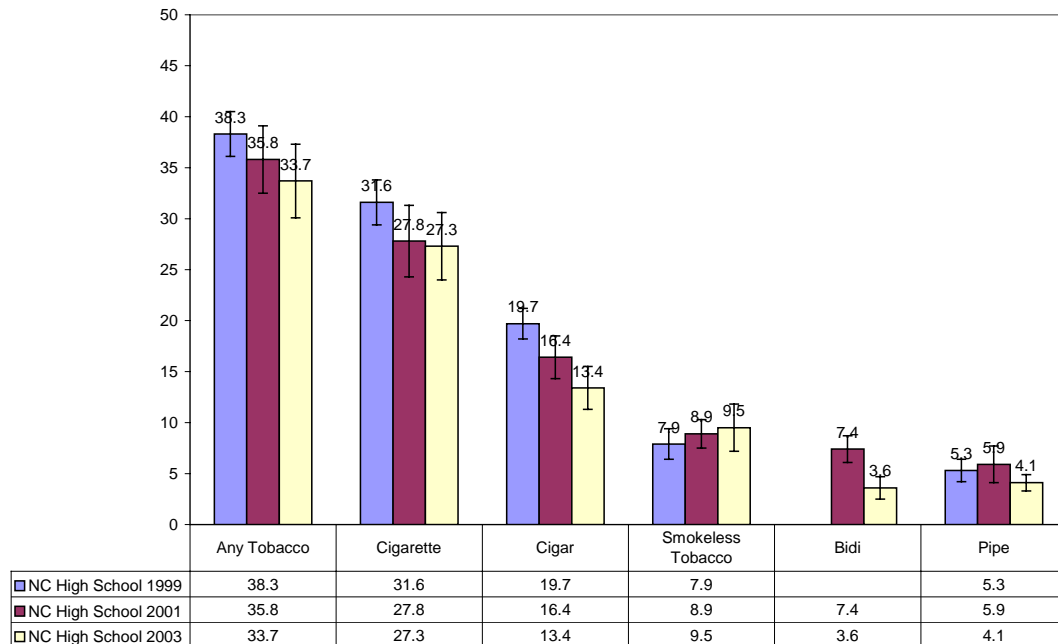
# 2003 N.C. Youth Tobacco Survey Results

Percentage of middle school students reporting current\* use, by tobacco product: NC Youth Tobacco Survey, 1999-2003



\* Used tobacco on at least one occasion during the 30 days preceding

Percentage of high school students reporting current\* use, by tobacco product: NC Youth Tobacco Survey, 1999-2003



\* Used tobacco on at least one occasion during the 30 days preceding