

# EXPLORING DIFFERENCES IN TOBACCO USE AMONG NEW YORK ADULTS



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# Exploring Differences in Tobacco Use Among New York Adults

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# Executive Summary

Not all adults are equally likely to use tobacco. There are disparities that put some groups at the highest risk of experiencing tobacco-related health problems. The goal of this report is to identify the characteristics of New York adults, such as age and race, that are associated with greater likelihood of using cigarettes, e-cigarettes, hookah, and cigars (including little cigars and cigarillos).

To help understand how New York is similar to or different from the rest of the United States, we also describe tobacco use patterns nationwide.

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## Takeaway Messages

Based on pooled data from 2015 and 2016, adults in New York were equally as likely as those in the United States overall to smoke cigarettes, use e-cigarettes, smoke hookah, and smoke cigars. When looking at combined tobacco use (that is, any use of cigarettes, e-cigarettes, hookah, or cigars) in those years, New York adults were less likely to use than U.S. adults overall. Of note, New York adults were less likely to smoke cigarettes than adults nationwide if isolating only 2016 data.

There are disparities in tobacco use in New York. For all or nearly all tobacco products examined in this report, these demographic groups were most likely to use:

- Males
- Adults with poor mental health
- Lesbian, gay, or bisexual adults

For some specific tobacco products, these demographic groups were most likely to use:

- Younger adults
- African Americans
- Adults with less education
- Adults without health insurance
- Low income adults

Identifying groups with the highest burdens of tobacco use can hopefully be a first step toward the creation of effective interventions. To maximize the chance of any intervention's relevance and success, members of affected communities should be part of the development process.<sup>1</sup>

# Introduction

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*Fewer New York adults smoke cigarettes now than ever before, but use of other tobacco products, like e-cigarettes, is increasing.*

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The prevalence of cigarette smoking among adults has declined nationwide and in New York<sup>2</sup> in recent years. A variety of public health efforts have contributed to this decline,<sup>3</sup> including clean indoor air laws,<sup>4</sup> taxation,<sup>5</sup> mass media campaigns,<sup>6</sup> and changing norms about the social acceptability of smoking.<sup>7</sup> New York State has the highest cigarette tax in the nation,<sup>8</sup> operates a successful Quitline,<sup>9</sup> and conducts effective media campaigns.<sup>10,11</sup> Certain localities have also implemented additional policies to reduce tobacco use. For example, New York City, Albany County, Orange County, and other jurisdictions ban sales of tobacco to people under age 21.<sup>12,13</sup> New York State includes e-cigarettes in their smoke-free air laws,<sup>14,15</sup> and New York City prohibits sales of certain flavored tobacco products, excluding menthol.<sup>16</sup> Many of these policies have proven effective.<sup>17</sup> Sales of flavored tobacco products in New York City declined after implementation of the ban,<sup>16,18</sup> and mortality due to certain types of cardiovascular disease declined statewide 2002–2011, due in part to aggressive tobacco control efforts.<sup>19</sup>

Although cigarette smoking has become less prevalent over time, use of other tobacco products has remained stable or even increased. For example, among New York adults, use of cigars rose from 4.3% in 2010 to 6.6% in 2016.<sup>2</sup> Just over 3% (3.1%) of New York adults used e-cigarettes in 2012, compared with 5.5% in 2016.<sup>2</sup>

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*Some populations, like adults with lower incomes or mental illness, are more likely to use tobacco.*

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With all tobacco products, the burden of use is not evenly distributed. Some groups face disproportionate burden. For example, adults with mental illness have much higher smoking prevalence than the rest of the population.<sup>20</sup> Adults who identify as lesbian, gay, or bisexual are more likely to use tobacco than those who identify as heterosexual.<sup>21</sup>

The goal of this report is to identify the demographic, personal, and household characteristics of New York adults that are associated with higher prevalence of using cigarettes, e-cigarettes, hookah, and cigars (including little cigars and cigarillos). Where available, we provide national data for context.

## Background: Which U.S. Adults Are Most Likely to Use Tobacco?

In the United States, the prevalence of smoking cigarettes has decreased over the past few decades,<sup>22,23</sup> while the prevalence of using other kinds of tobacco, like e-cigarettes, has increased.<sup>24,25</sup> However, not all Americans are equally likely to use tobacco.

Below we briefly review the individual characteristics associated with greater likelihood of using cigarettes, e-cigarettes, hookah, and cigars, across the United States. Later in this report, we examine the role of these characteristics and provide data for New York specifically.

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*Across age groups, young adults are the most likely to use e-cigarettes, hookah, and cigarillos. Cigarette smoking is most common in late young adulthood and middle age (aged 25–44).*

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### Age

In the United States, the majority of adult daily smokers try their first cigarette by age 18.<sup>26</sup> Smoking prevalence is highest from aged 25–44 (between 20% and 25% of adults in this age range smoke) and lowest among adults aged 55 and over (8–17%).<sup>27</sup>

Young adults are almost twice as likely to use e-cigarettes than older adults,<sup>27,28</sup> potentially because young adults are more comfortable with new technology, more likely to experiment with tobacco products, or more likely to exclude e-cigarettes from anti-tobacco social norms.

Young adults are also twice as likely as older adults to smoke any type of cigar and almost nine times as likely to smoke hookah.<sup>27,29</sup> Compared with older adults, young adults might be more likely to smoke hookah because they perceive it as less harmful.<sup>30</sup> Hookah and little cigars and cigarillos are available in a variety of flavors, and this could add to their appeal for young adults.<sup>31</sup>

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*Men are more likely than women to use most kinds of tobacco.*

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### Gender

In the early 20th century, American men were far more likely to smoke cigarettes than American women, largely because social norms disapproved of women smoking.<sup>32</sup> Over time, and due in

part to industry marketing, that gender gap has narrowed, but smoking prevalence is still about 30% higher among men than women.<sup>27</sup>

Today, men in the United States are also slightly more likely to use e-cigarettes<sup>27,28</sup> and slightly more likely to smoke hookah.<sup>27</sup> The difference in prevalence of cigar smoking by gender is particularly striking: men are almost four times more likely to smoke cigars than women.<sup>27</sup>

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*Certain racial/ethnic groups are at higher risk for tobacco use, but specific patterns vary by type of tobacco product.*

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## Race and Ethnicity

Across the country, the prevalence of cigarette smoking is extremely disproportionate by race/ethnicity. For example, non-Hispanic American Indians and Alaska natives are three times as likely to smoke as non-Hispanic Asians.<sup>27</sup> Although smoking prevalence is typically similar between non-Hispanic white and non-Hispanic black adults,<sup>27</sup> black Americans are more likely to die from many of the diseases caused by smoking.<sup>23</sup>

The prevalence of use by race/ethnicity varies for other tobacco products. For example, adults who identify as non-Hispanic white adults are more likely to “vape” (use e-cigarettes) than adults who identify as non-Hispanic black or Hispanic.<sup>27,28</sup> Non-Hispanic white adults have lower prevalence of hookah use than most racial/ethnic minorities.<sup>27</sup>

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*Lower income is associated with more tobacco use. Less education and a lack of health insurance—both of which are often related to having a low income—are also risk factors for higher rates of tobacco use.*

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## Income

In the United States as a whole, lower income is associated with higher prevalence of cigarette smoking,<sup>28</sup> e-cigarette use,<sup>27,33,34</sup> cigar smoking,<sup>27</sup> and hookah smoking.<sup>27</sup> These disparities may be associated with factors like stress and poor access to cessation services.<sup>35</sup>

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## Education

Lower educational attainment (i.e., less than a college degree) is associated with higher prevalence of cigarette smoking,<sup>22,28,36</sup> cigar smoking,<sup>27</sup> and e-cigarette use.<sup>27</sup> Individuals with less education might have poorer understanding of the harms of



smoking or have lower socioeconomic status, making it harder for them to access health services.<sup>37</sup>

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## Health Insurance

Adults with no health insurance and public health insurance have higher smoking prevalence.<sup>22</sup> For example, in 2014, uninsured adults were more than twice as likely to smoke as adults with private health insurances.<sup>22</sup> Current use of e-cigarettes is also associated with a lack of health insurance.<sup>33,34</sup> Adults without health insurance or with less comprehensive health insurance may have lower incomes and reduced access to preventive care and cessation treatment,<sup>38</sup> which could contribute to higher prevalence of tobacco use.

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*Mental health status is associated with tobacco use, such that individuals with mental illness have higher prevalence of smoking and using other tobacco products.*

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## Mental Health Status

Adults with mental illness have exceptionally high prevalence of smoking and other tobacco use, including e-cigarettes, cigarillos, and hookah.<sup>20,39</sup> In one study, adults with a current psychiatric diagnosis had more than three times the odds of smoking as adults with no current diagnosis.<sup>40</sup> High prevalence of tobacco use among adults with mental illness may be related to stressful living conditions, lack of access to cessation treatment and other health care services, self-medicating, a psychiatric tradition that discouraged quitting, and neurobiological responses.<sup>20,41</sup>

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*Being a sexual minority is associated with higher rates of using tobacco, including cigarettes, e-cigarettes, cigars, and hookah.*

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## Sexual Orientation

Nationally, sexual minorities, including lesbian, gay, or bisexual adults, are up to twice as likely to smoke cigarettes than the general U.S. population, potentially due to stress, reduced access to health care, and targeted marketing by tobacco companies.<sup>21,27,42</sup> Adults who identify as bisexual or gay/lesbian are about twice as likely as heterosexual adults to use e-cigarettes, cigars, and hookah.<sup>27</sup>

## Methods

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*These are the types of questions explored in this report:*

**How does New York compare with the United States?**

*For example, are adults in New York with high school educations equally as likely to smoke cigarettes as adults with high school educations in the rest of the United States?*

**What characteristics of adults in New York are associated with higher prevalence of tobacco use?**

*For example, within New York, are adults with high school educations equally as likely to smoke cigarettes as adults with college educations?*

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This report examines the prevalence of use of tobacco products by demographics and other personal and household characteristics for adults living in New York and the rest of the United States. We review use of cigarettes, e-cigarettes, hookah, cigars, or any combination of those four tobacco products.

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### Data

This study uses pooled data from 2015 and 2016 for four cross-sectional surveys of adults. We used the New York Behavioral Risk Factor Surveillance Survey (NY-BRFSS), National Health Interview Survey (NHIS), New York Adult Tobacco Survey (NY ATS), and New York's state-sponsored National Adult Tobacco Survey (NATS). Additional information about each data source is available in **Appendix A**.

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### Measures

The outcomes we examine appear in **Table 1**.

For each outcome, we examine prevalence by age, sex, race/ethnicity, New York City vs. rest of state, educational attainment, health insurance, household income, mental health status, and sexual orientation (defined in **Appendix A**).

**Table 1. Tobacco Use Outcomes Analyzed for this Report**

Outcome	Definition
Current cigarette smoking	Smoked at least 100 cigarettes in lifetime and now smokes cigarettes every day or some days
Number of cigarettes smoked per day	Number of cigarettes smoked per day among current cigarette smokers
Current e-cigarette use	Now uses e-cigarettes rarely, some days, or every day
Current hookah smoking	Now smokes hookah rarely, some days, or every day
Current cigar smoking	Now smokes cigars, cigarillos, or little cigars rarely, some days, or every day
Current use of cigarettes, e-cigarettes, hookah, or cigars	Meets definition of current use for one or more of these four tobacco products

## Analyses

For our analyses, we compared the 2015-2016 overall prevalence of tobacco use and the average number of cigarettes per day between New York State and the United States as a whole or the rest of the United States, depending on the data source. We then looked at the relationship of each outcome with each demographic factor for each geography. More information about analyses appears in **Appendix A**.

## Who's Smoking Cigarettes?

### Key Points

- When pooling data from 2015 and 2016, as is done throughout this report, adults in New York were equally likely to smoke cigarettes than those in the total United States.
  - Of note, when examining 2016 data only, adults in New York were less likely to smoke cigarettes than those in the total United States.<sup>2</sup>
- There are many characteristics associated with greater likelihood of smoking among adults who live in New York.
- New York adults are more likely to smoke if they have the following characteristics:
  - Are aged 25–64 rather than young adults (aged 18–24) or older adults (aged 65 and above)
  - Are male
  - Are white or African American rather than Hispanic
  - Have lower levels of education
  - Do not have health insurance
  - Have lower incomes
  - Have poor mental health
  - Are lesbian, gay, or bisexual

As shown in **Figure 1**, when pooling data from 2015 and 2016, New York adults were equally like to smoke cigarettes compared to adults nationwide (14.7% of adults in New York versus 15.3% of adults across the United States). Of note, when examining 2016 data only, adults in New York were less likely to smoke cigarettes than those in the total United States.<sup>2</sup>

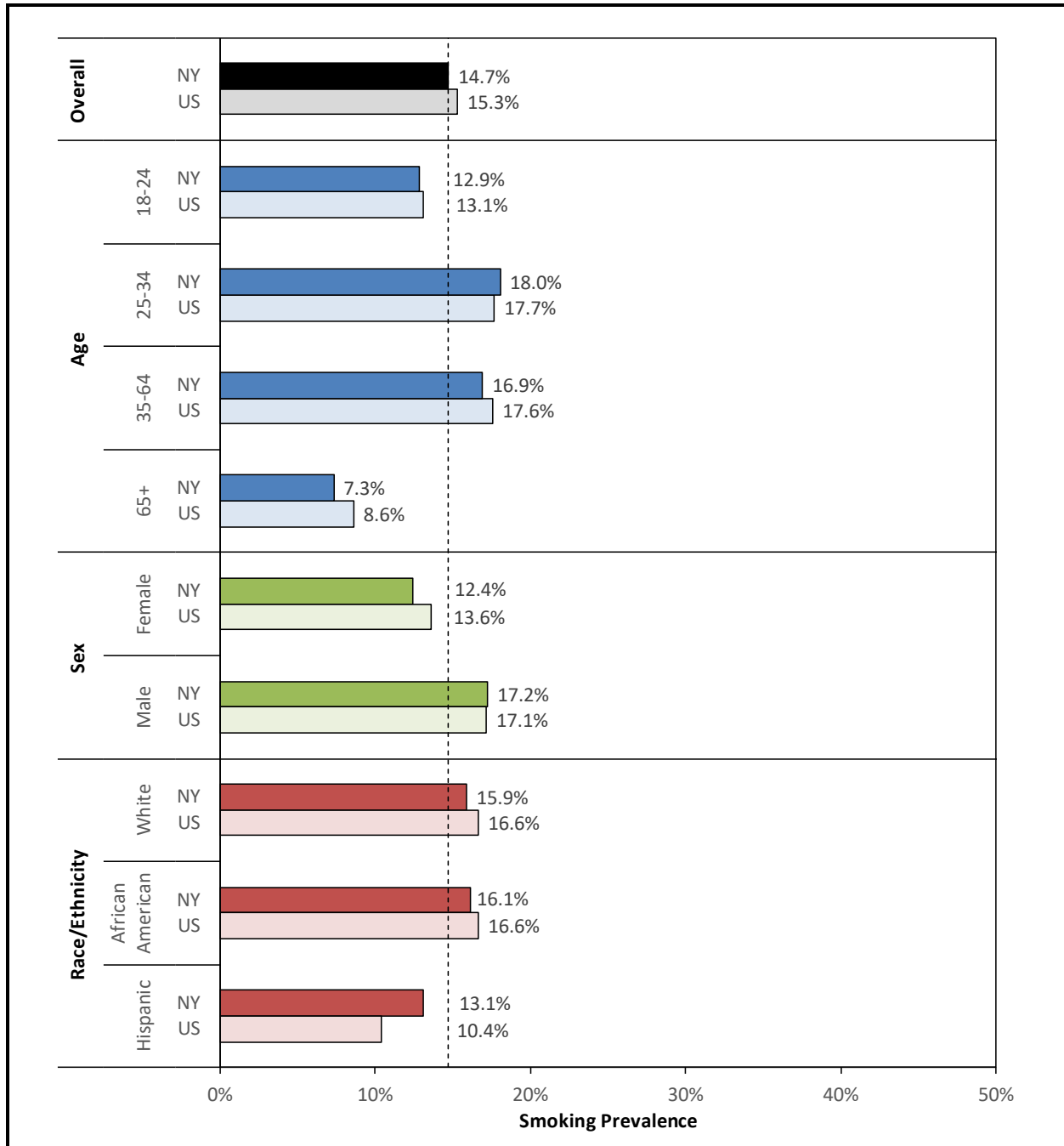
New York adults aged 25–64 are more likely to smoke than those who are younger (18–24 years old) or older (65 year and older). Smoking patterns by age similar in the United States overall, with smoking still lowest among young adults (18–24 years old) and

older adults (65 years and older). Both in New York and nationwide, men are more likely to smoke than women, and smoking is more common among white and African American adults than among Hispanic adults.

As shown in **Figure 2**, in New York and nationwide, adults with lower levels of education are more likely to smoke cigarettes than those with higher levels of education. Adults in New York and nationwide who do not have health insurance are more likely to smoke than those who do, and adults who earn less money per year are more likely to smoke than those who earn more.

New York adults who say they have poor mental health are more likely to smoke than those who have good mental health. Data on mental health are not available for the United States as a whole. In New York and the United States as a whole, lesbian, gay, and bisexual adults are more likely to smoke than heterosexual adults.

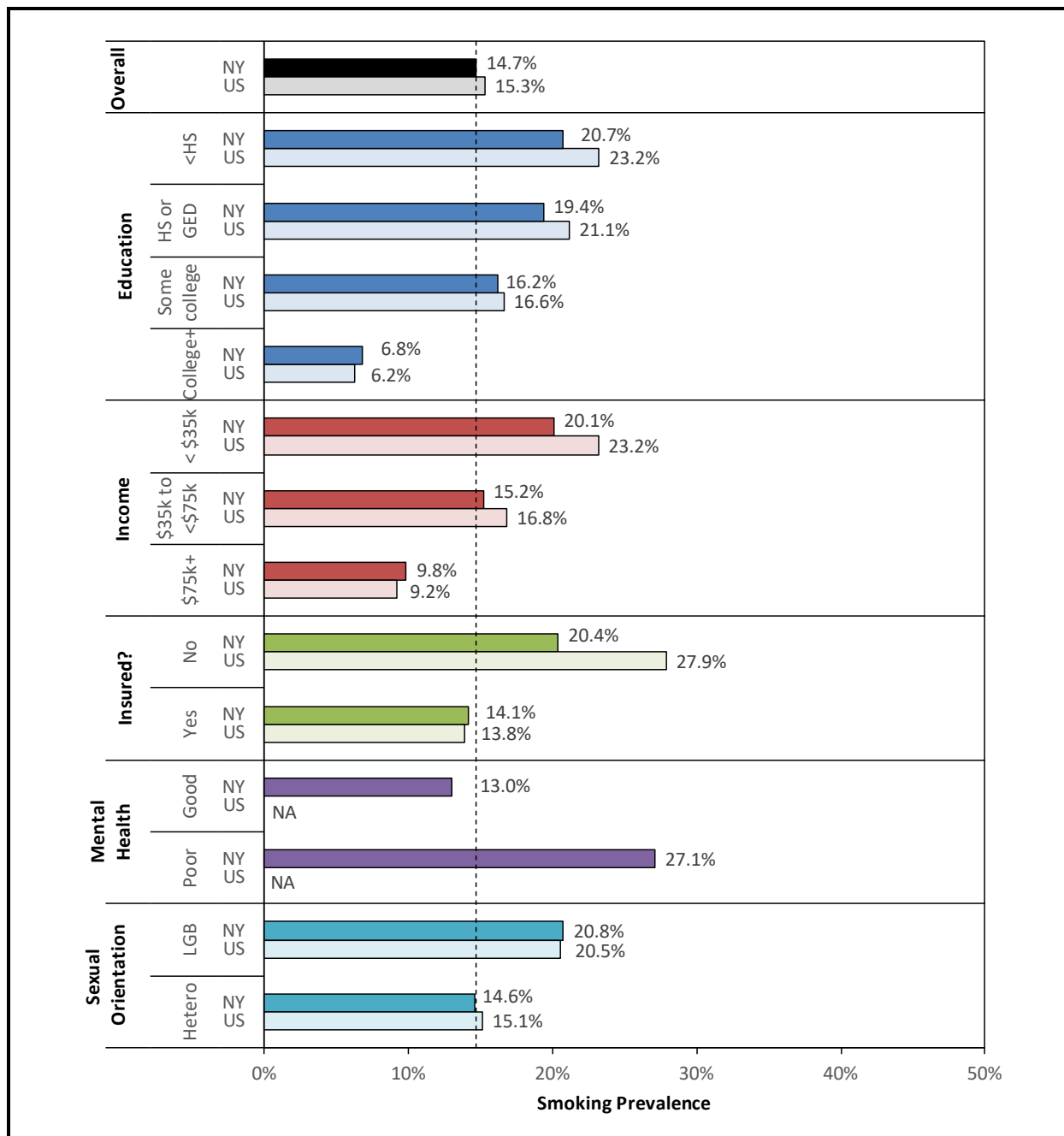
**Figure 1. Smoking Prevalence Overall and by Age, Sex, and Race/Ethnicity, NY-BRFSS and NHIS 2015–2016**



Legend: The dotted line denotes the New York overall prevalence. NY = New York State; US = United States.

Notes: There are statistically significant differences in NY and in the US by age (25–34, 35–64 > 18-24 > 65+), sex (Male > Female), and race/ethnicity (African American, White > Hispanic).

**Figure 2. Smoking Prevalence by Education, Health Insurance, Income, Mental Health Status, and Sexual Orientation, NY-BRFSS and NHIS 2015–2016**



Legend: The dotted line denotes the New York overall prevalence. HS = high school; LGB = lesbian, gay, or bisexual; NA = not available; NY = New York State; US = United States.

Notes: There are statistically significant differences in NY by education (Less than HS, HS or GED > Some college > College +), income (Less than \$35,000 > \$35,000–\$74,999 > \$75,000 or more), insurance status (Not covered > Covered), mental health status (Poor > Good), and sexual orientation (LGB > Heterosexual). There are statistically significant differences in the US by education (Less than HS > HS or GED > Some college > College +), income (Less than \$35,000 > \$35,000–\$74,999 > \$75,000 or more), insurance status (Not covered > Covered), and sexual orientation (LGB > Heterosexual).

## Who's Smoking More Cigarettes Per Day?

### Key Points

- Adult smokers in New York smoked just as intensely (that is, a similar number of cigarettes per day) as those in the rest of the United States.
- Some New York smokers smoke more cigarettes per day than others.
- Among adult smokers living in New York, smoking more cigarettes per day is associated with the following characteristics:
  - Being older
  - Being male
  - Being white or African American rather than Hispanic
  - Living in the rest of New York State instead of New York City
  - Having only a high school degree compared with attending college
  - Having poor mental health

As shown in **Figure 3**, adult cigarette smokers in New York smoked approximately the same number of cigarettes per day (10.2) as smokers in the rest of the United States (11.2).

Intensity of cigarette smoking (i.e., cigarettes per day) by age did not vary between New York and the rest of the United States. Among New York smokers, older age was a risk factor for greater smoking intensity. Women in New York smoked fewer cigarettes per day than those in the rest of the United States, but there were no differences between men in New York and men in the rest of the United States. In New York, male smokers smoked more cigarettes per day than female smokers.

Intensity of cigarette smoking by race/ethnicity did not differ between New York and the rest of the United States. New York smokers who identified as white or African American smoked more cigarettes per day than those who identified as Hispanic.

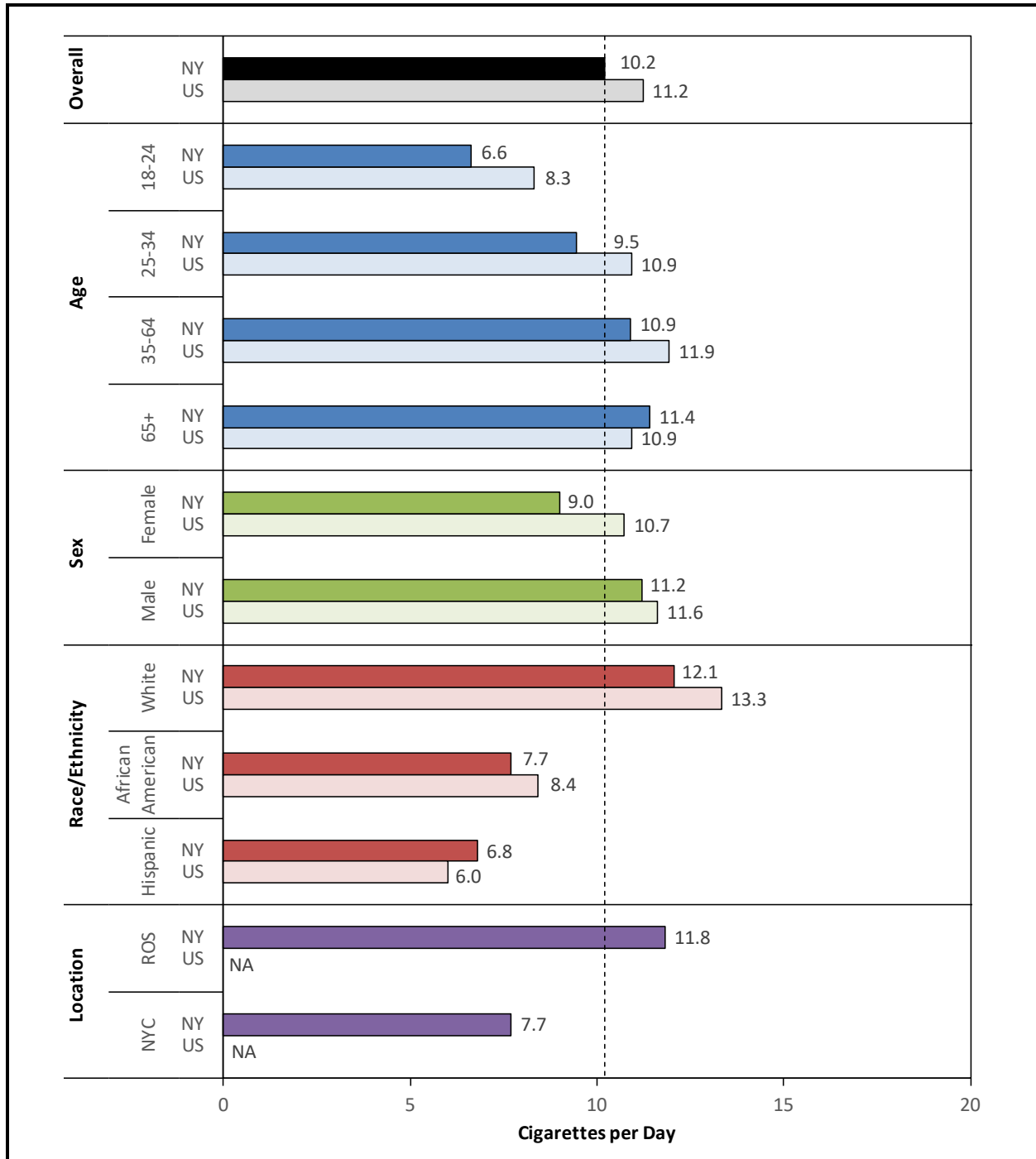


Adult smokers in New York City smoked fewer cigarettes per day than those living in the rest of the state.

As shown in **Figure 4**, smoking intensity by educational attainment was similar for New York and the rest of the United States. Within New York, lower educational attainment was a risk factor for greater smoking intensity. There were no differences in smoking intensity by health insurance comparing New York to the rest of the United States, and health insurance was not related to smoking intensity among New York smokers. The same was true for income: no differences in smoking intensity by income comparing New York with the rest of the United States or among New Yorkers with different incomes.

New York adult smokers who report poor mental health smoked fewer cigarettes per day than adult smokers who report poor mental health in the rest of the United States. In New York, self-reported poor mental health was a risk factor for greater smoking intensity. New York adults who identified as gay, lesbian, or bisexual reported smoking approximately the same number of cigarettes per day as those who identified as heterosexual. Data on sexual orientation were not available for the rest of the United States.

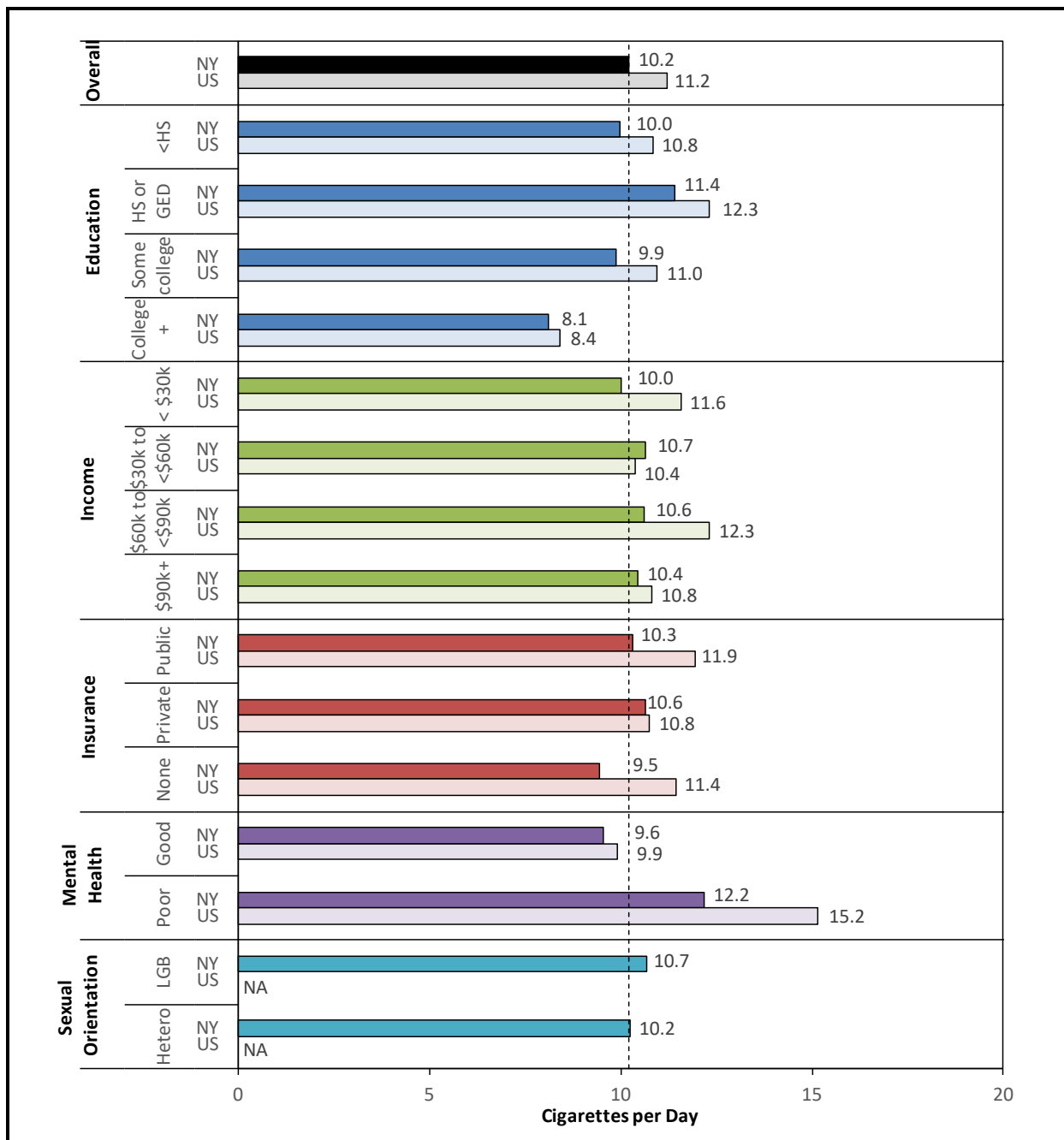
**Figure 3. Cigarettes Smoked Per Day (Overall) and by Age, Sex, Race/Ethnicity, and Location Among Adult Current Smokers, NY ATS and NATS 2015–2016**



Legend: The dotted line denotes the New York overall cigarettes per day. NA = not available; NY = New York State; US = rest of United States.

Notes: There are statistically significant differences in NY by age (65+, 35–64, 25–34 > 18–24), sex (Male > Female), race/ethnicity (White > African American, Hispanic), and location (rest of state > New York City). There are statistically significant differences in the United States by age (35–64 > 18–24), and race/ethnicity (White > African American, Hispanic).

**Figure 4. Cigarettes Smoked Per Day by Education, Health Insurance, Income, Mental Health Status, and Sexual Orientation, Among Adult Current Smokers, NY ATS and NATS 2015–2016**



Legend: The dotted line denotes the New York overall cigarettes per day. HS = high school; NA = not available; NY = New York State; US = rest of United States.

Notes: There are statistically significant differences in NY by education (HS > Some college > College+) and mental health status (Poor > Good). There are statistically significant differences in the rest of the United States by mental health status (Poor > Good).

## Who's Using E-cigarettes?

### Key Points

- Adults in New York and the rest of the United States are equally likely to use e-cigarettes.
- Within New York, adults are particularly likely to use e-cigarettes if they have the following characteristics:
  - Are younger
  - Are male
  - Have a low to moderate level of education
  - Have poor mental health
  - Identify as lesbian, gay, or bisexual

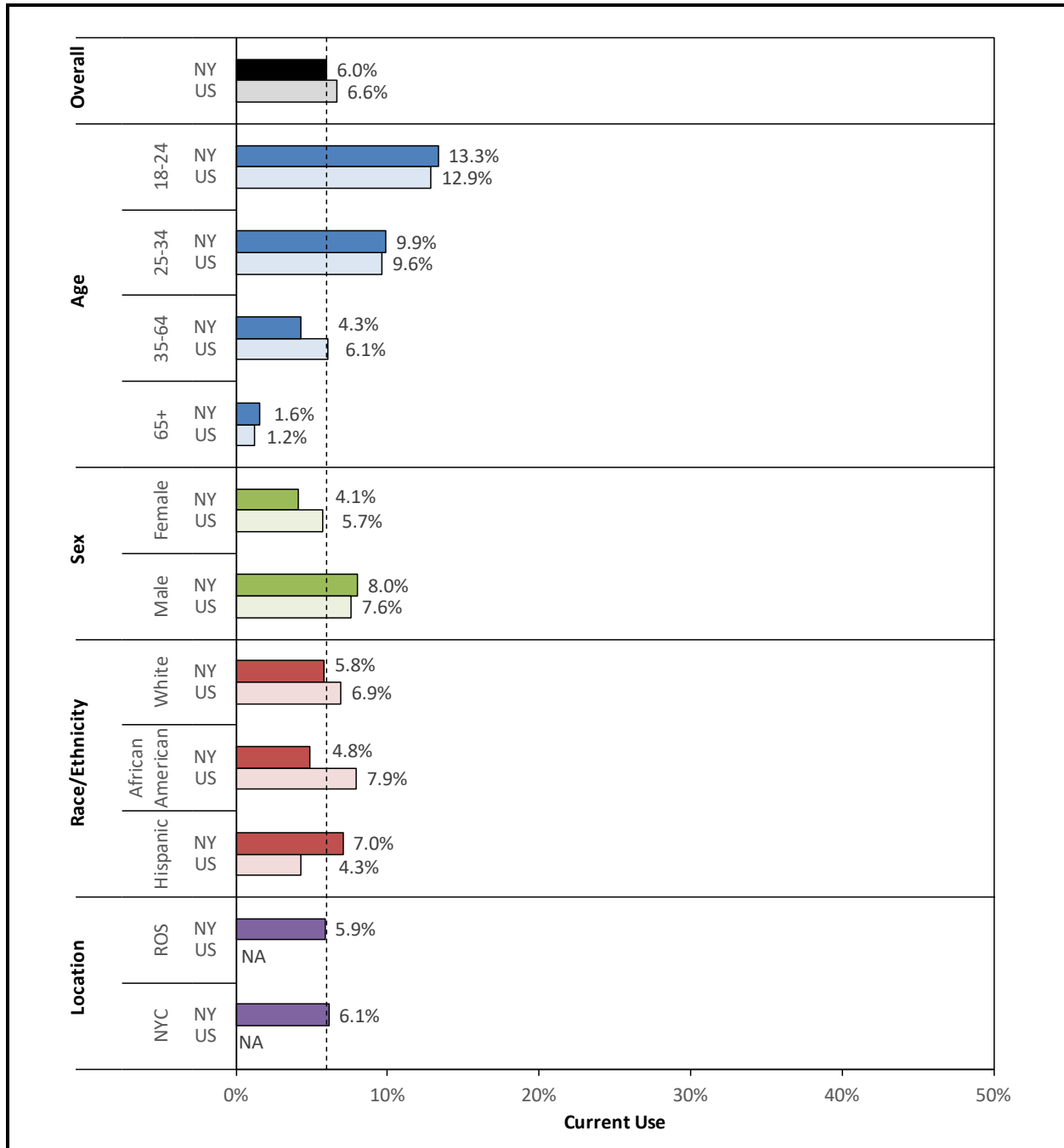
As shown in **Figure 5**, there were no differences in the prevalence of current e-cigarette use between New York (6.0%) and the rest of the United States (6.6%). There were also no differences by age in the prevalence of current e-cigarette use in New York versus the rest of the United States. Among New Yorkers, younger adults were at greater risk of using e-cigarettes. Prevalence was higher among 18- to 24-year-olds and 25- to 34-year-olds than among 35- to 64-year-olds. Adults aged 65 or older had even lower prevalence of use. Females in New York were less likely than their counterparts in the rest of the United States to be current e-cigarette users. Within New York State, males were more likely to use e-cigarettes than females.

There were no significant differences between the prevalence of current e-cigarette use by race/ethnicity for New York State compared with the rest of the United States or among adults of different races/ethnicities within New York. The prevalence of e-cigarette use among adults living in New York City was comparable with the rest of New York State.

As shown in **Figure 6**, e-cigarette use by education level did not differ between New York and the rest of the United States. Within New York, low to moderate educational attainment (that is, a high school education or GED or some college education) was a risk factor for e-cigarette use compared with the highest level of education (a college degree or higher). However, adults with the very lowest level of education (less than a high school) did not differ from adults with a college degree or more. The prevalence of e-cigarette use by education did not vary between New York and the rest of the United States. The prevalence of e-cigarette use was not different by type of health insurance within New York. New Yorkers with the highest level of income (\$90,000 per year or more) were more likely to be current e-cigarette users than their counterparts in the rest of the United States. Income was not associated with risk of e-cigarette use within New York.

E-cigarette use by mental health status did not differ between New York and the rest of the United States. Within New York, adults with self-identified poor mental health were more likely to be current e-cigarette users than adults with good mental health. New York adults who identified as gay, lesbian, or bisexual were more likely to use e-cigarettes than those who identified as heterosexual. Data on sexual orientation were not available for the rest of the United States.

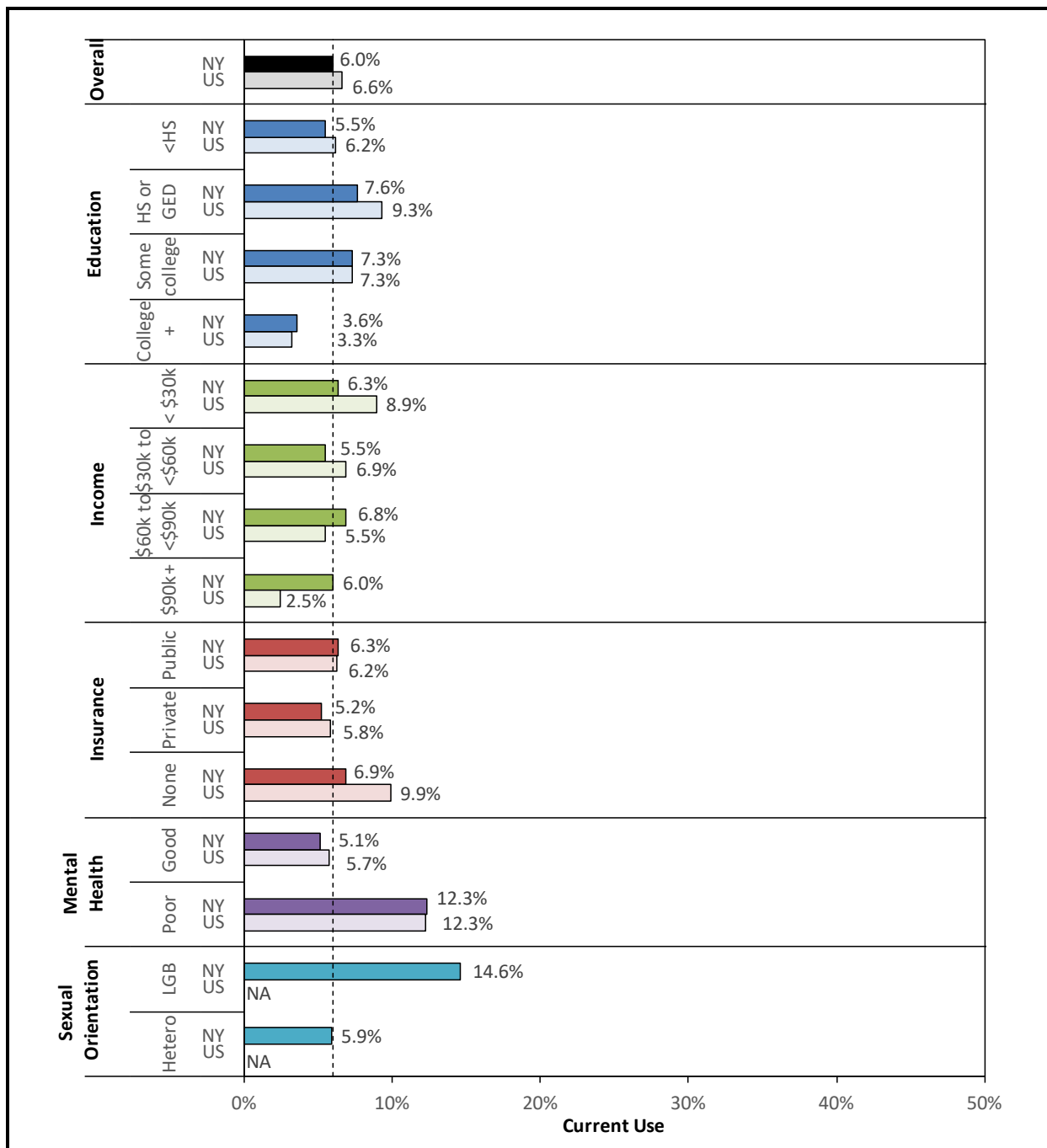
**Figure 5. E-cigarette Use Overall and by Age, Sex, Race/Ethnicity, and Location, NY ATS and NATS 2015–2016**



Legend: The dotted line denotes the New York overall prevalence. NA = not available; NY = New York State; US = rest of United States.

Notes: There are statistically significant differences in NY by age (18–24, 25–34 > 35–64 > 65+), and sex (Male > Female). There are statistically significant differences in the United States by age (18–24 > 35–64 > 65+; 25–34 > 65+).

Figure 6. E-cigarette Use by Education, Health Insurance, Income, Mental Health Status, and Sexual Orientation, NY ATS and NATS 2015–2016



Legend: The dotted line denotes the New York overall prevalence. HS = high school; LGB = lesbian, gay, or bisexual; NA = not available; NY = New York State; US = rest of United States.

Notes: There are statistically significant differences in NY by education (HS, Some College > College+), mental health status (Poor > Good), and sexual orientation (LGB > Heterosexual). There are statistically significant differences in the United States by education (HS, Some College > College+), income (Less than \$30,000, \$30,000–\$59,999 > \$90,000+), insurance type (None > Private), and mental health status (Poor > Good).

## Who's Smoking Hookah?

### Key Points

- Adults in New York and the rest of the United States were similarly likely to smoke hookah.
- Within New York, adults are particularly likely to smoke hookah if they have the following characteristics:
  - Are younger
  - Are male
  - Are Hispanic or African American
  - Live in New York City instead of the rest of the state
  - Have moderate or high levels of education
  - Have moderately high income
  - Identify as lesbian, gay, or bisexual

As shown in **Figure 7**, the prevalence of current hookah smoking did not differ between New York (4.1%) and the rest of the United States (3.5%).

The prevalence of current hookah use did not differ between New York adults and their counterparts in the rest of the United States for any age group. Within New York, younger age was associated with hookah smoking. Prevalence among 18- to 24-year-olds exceeded those of 25- to 34-year-olds, which in turn exceeded those of 35- to 64-year-olds. There were no statistically significant differences between hookah use by sex in New York compared with the rest of the United States, although New York males were more likely to be current hookah smokers than New York females.

New York and the rest of the United States did not differ in the prevalence of hookah use by race/ethnicity. New Yorkers who identified as Hispanic or non-Hispanic African American were

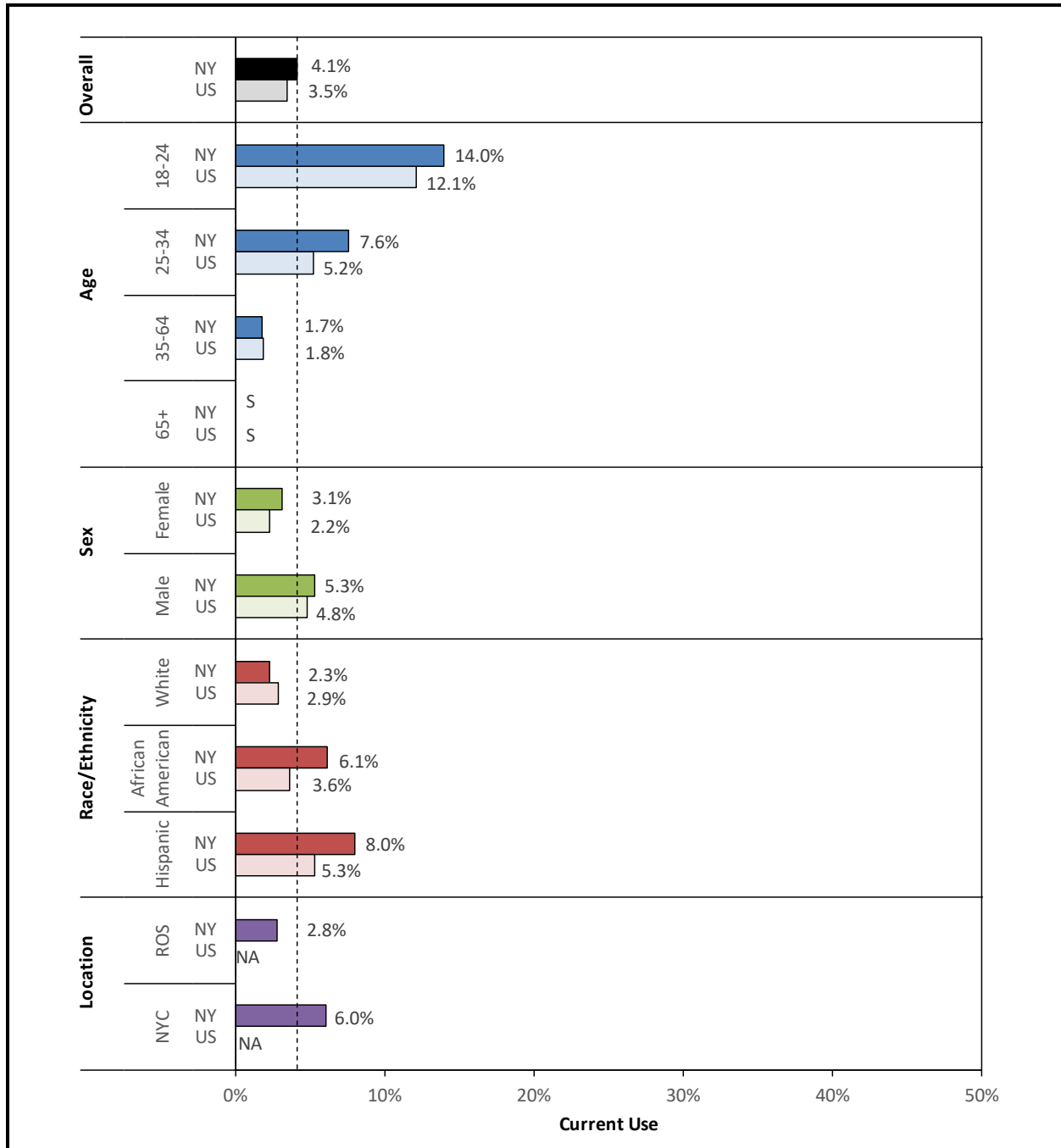


more likely to smoke hookah than non-Hispanic white New Yorkers. More adults living in New York City reported current hookah smoking than adults living in the rest of New York State.

As shown in **Figure 8**, New York adults with a college degree or higher were more likely than adults with the same level of education in the rest of the United States to smoke hookah. Overall, moderate and high educational attainment was a risk factor for hookah smoking compared with low educational attainment among New York adults. Specifically, adults with some college education were more likely to smoke hookah than those with a high school or less than high school education. Adults with very high education levels (i.e., college or more) are more likely to smoke hookah than those with very low education levels. The prevalence of hookah smoking by type of health insurance was not statistically significantly different between New York and the rest of the United States or among New Yorkers with different types of health insurance. Adults with high incomes in New York (those making \$60,000–\$89,999 or \$90,000 or more) were more likely to smoke hookah than in the rest of the United States.

The prevalence of current hookah use by self-reported mental health status did not differ between New York and the rest of the United States, nor did it differ among New Yorkers with poor versus good mental health. New York adults who identified as lesbian, gay, or bisexual were more likely to smoke hookah than adults who identified as heterosexual. Data on sexual orientation were not available for the rest of the United States.

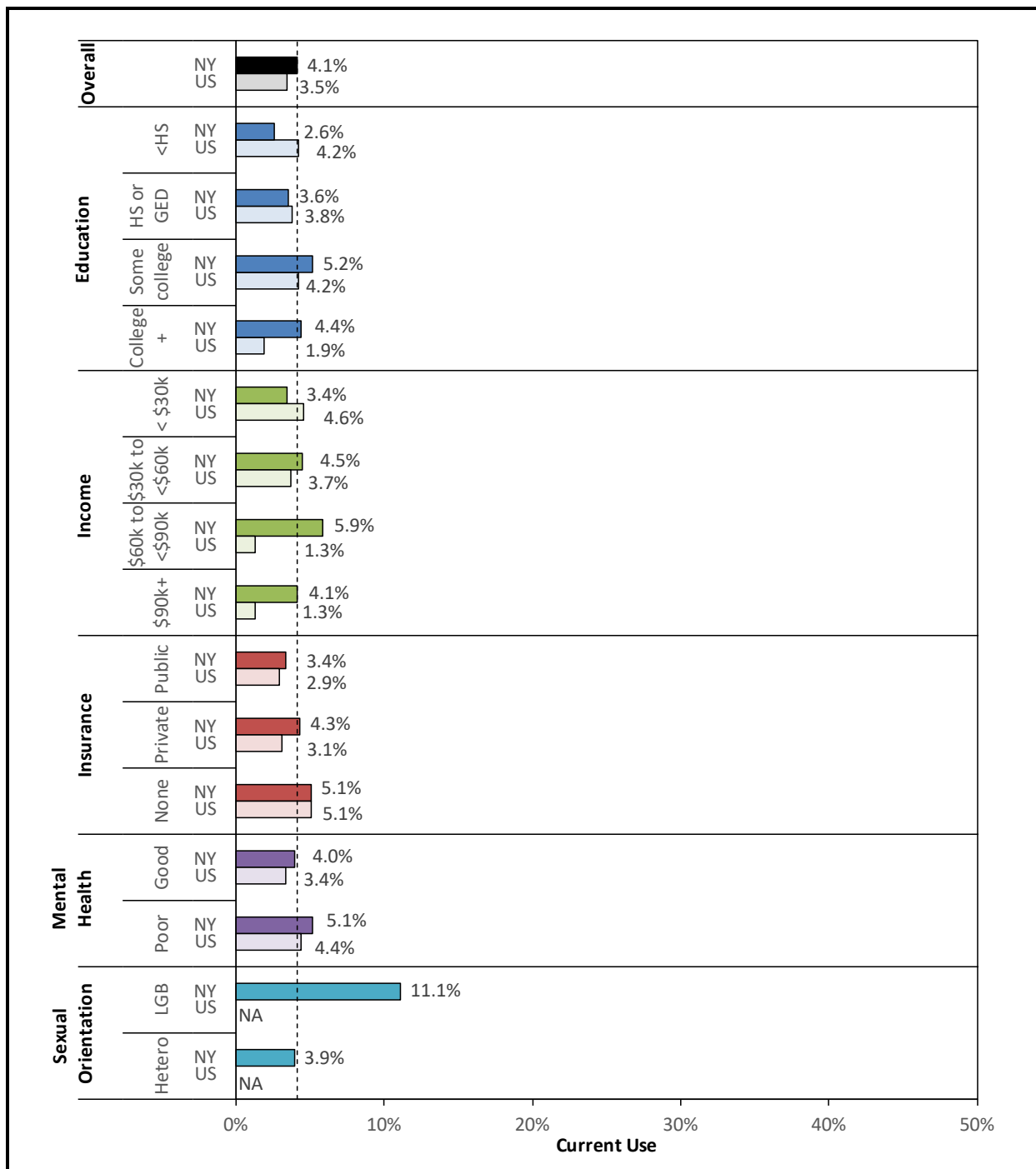
**Figure 7. Hookah Smoking Overall and by Age, Sex, Race/Ethnicity, and Location, NY ATS and NATS 2015–2016**



Legend: The dotted line denotes the New York overall prevalence LGB = lesbian, gay, or bisexual; NA = not available; NY = New York State; US = rest of United States; S = estimates that have been suppressed due to insufficient sample size.

Notes: There are statistically significant differences in NY by age (18–24 > 25–34 > 35–64), sex (Male > Female), race/ethnicity (Hispanic, African American > White), and location (New York City > rest of state). There are statistically significant differences in the rest of the United States by age (18–24, 25–34 > 55–64), and sex (Male > Female).

**Figure 8. Hookah Smoking Overall and by Education, Health Insurance, Income, Mental Health Status, and Sexual Orientation, NY ATS and NATS 2015–2016**



Legend: The dotted line denotes the New York overall prevalence. HS = high school; LGB = lesbian, gay, or bisexual; NA = not available; NY = New York State; US = rest of United States.

Notes: There are statistically significant differences in NY by education (Some college > HS, Less than HS; College+ > Less than HS) and sexual orientation (LGB > Heterosexual). There are statistically significant differences in the US by income (Less than \$30,000, \$30,000–\$59,999 > \$60,000–\$89,999, \$90,000+).

## Who's Smoking Cigars?

### Key Points

- Adults in New York and the rest of the United States were equally likely to smoke cigars, including little cigars and cigarillos.
- Within New York, adults are more likely to smoke cigars if they have the following characteristics:
  - Are younger
  - Are male
  - Are Hispanic
  - Have no health insurance
  - Have very high or very low incomes rather than moderate incomes
  - Have poor mental health
  - Identify as lesbian, gay, or bisexual

As shown in **Figure 9**, the prevalence of current cigar smoking among adults was equivalent in New York versus the rest of the United States (6.6% vs. 7.2%).

New York adults aged 65 and older were more likely to smoke cigars than their counterparts in the rest of the United States. Within New York, younger age was a risk factor for current cigar smoking. Adults aged 18–24 and 25–34 were more likely to smoke cigars than those 35–64, who in turn were more likely than those aged 65 and older. Current cigar smoking use by sex was equivalent for New York and the rest of the United States. However, adult males in New York were more likely to smoke cigars than adult females.

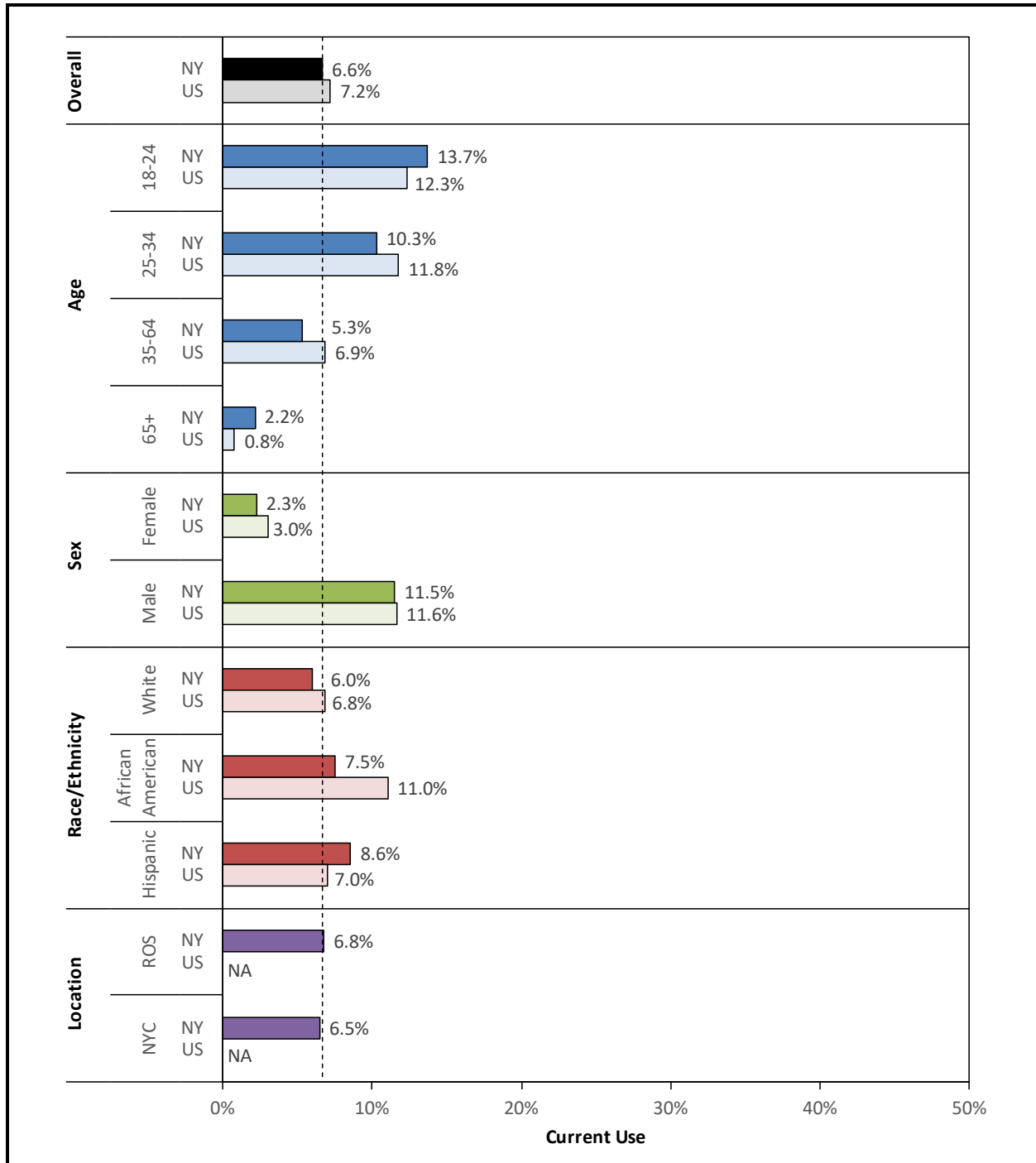
New York adults and rest of the United States adults did not differ in cigar smoking by race/ethnicity. Hispanic New York adults were more likely to be current cigar smokers than non-Hispanic white

adults. Adults living in New York City and adults living in the rest of the state did not differ in the prevalence of cigar smoking.

As shown in **Figure 10**, fewer New York adults with a high school education or GED smoked cigars than in the rest of the United States, but the prevalence of cigar smoking among other educational groups did not differ between New York and the rest of the United States. Education was not a risk factor for cigar smoking within New York. The prevalence of cigar smoking by type of health insurance was similar for New York and the rest of the United States. New York adults with no health insurance were more likely to smoke cigars if they had no insurance than if they had public or private insurance. Adults in New York with an annual income of \$30,000–\$59,999 were less likely to smoke cigars than their counterparts in the rest of the United States. New York adults with very high incomes (\$90,000 or more) and very low incomes (less than \$30,000) were more likely to smoke cigars than those with moderate incomes (\$30,000–\$59,999).

The prevalence of cigar smoking by mental health status did not differ between New York adults and adults in the rest of the United States, but New York adults with self-reported poor mental health were more likely to be current cigar smokers than those with good mental health. New York adults who identified as lesbian, gay, or bisexual were more likely to report current cigar smoking than those who identified as heterosexual. Data on sexual orientation were not available for the rest of the United States.

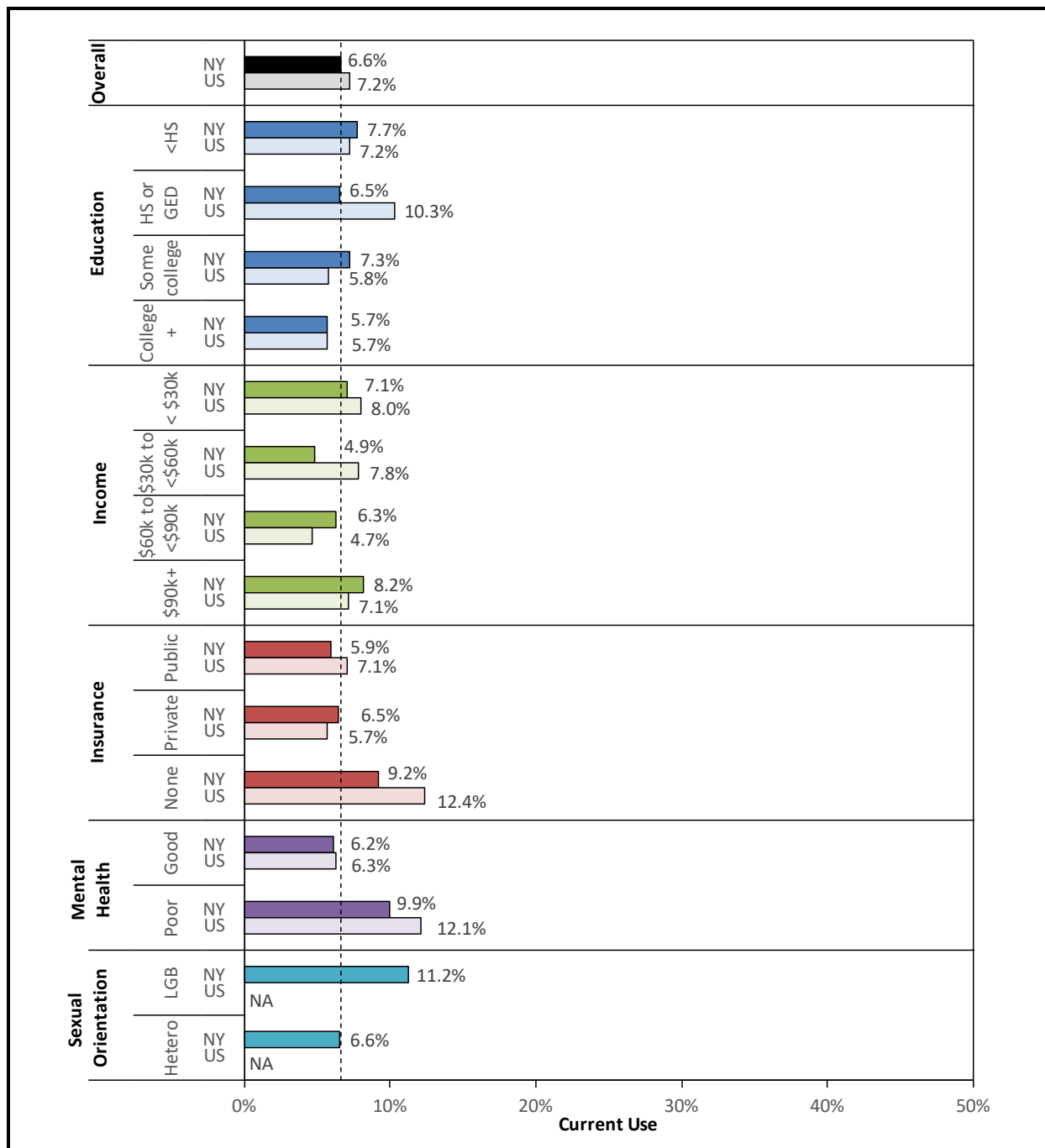
**Figure 9. Cigar Smoking Overall and by Age, Sex, Race/Ethnicity, and Location, NY ATS and NATS 2015–2016**



Legend: The dotted line denotes the New York overall prevalence. NA = not available; NY = New York State; US = rest of United States.

Notes: There are statistically significant differences in NY by age (18–24, 25–34 > 35–64 > 65+), sex (Male > Female), and race/ethnicity (Hispanic > White). There are statistically significant differences in the US by age (18–24, 25–34 > 35–64 > 65+), sex (Male > Female), and race/ethnicity (African American > White).

**Figure 10. Cigar Smoking Overall and by Education, Health Insurance, Income, Mental Health Status, and Sexual Orientation, NY ATS and NATS 2015–2016**



Legend: The dotted line denotes the New York overall prevalence. HS = high school; LGB = lesbian, gay, or bisexual; NA = not available; NY = New York State; US = rest of United States.

Notes: There are statistically significant differences in NY by income (\$90,000 +, Less than \$30,000 > \$30,000–\$59,999), insurance type (None > Public, Private), mental health status (Poor > Good), and sexual orientation (LGB > Heterosexual). There are statistically significant differences in the US by education (HS > Some college, College+), income (Less than \$30,000 > \$60,000–\$89,999), insurance type (None > Public, Private), and mental health status (Poor > Good).

# Who's Using Tobacco Products?

## Key Points

- In this section, the term “*tobacco use*” refers to use of the four products being reviewed in this report: cigarettes, e-cigarettes, hookah, and cigars (including little cigars and cigarillos).
- The prevalence of tobacco use among adults in New York is lower than in the rest of the United States.
- Within New York, adults are particularly likely to use these tobacco products if they have the following characteristics:
  - Are younger
  - Are male
  - Are Hispanic or African American
  - Have lower levels of education
  - Have no health insurance or public health insurance
  - Have lower incomes
  - Have poor mental health
  - Identify as lesbian, gay, or bisexual

As shown in **Figure 11**, fewer adults in New York currently used any of these tobacco products (cigarettes, e-cigarettes, hookah, and cigars) than in the rest of the United States (24.0% vs. 27.5%).

Fewer New York adults aged 25–34 and aged 35–64 used tobacco than adults those same ages in the rest of the United States.

Within New York, younger age was a risk factor for tobacco use among New York adults. Specifically, more adults aged 18–24 and 25–34 used tobacco than those aged 35–64, who in turn used tobacco more than adults aged 65 and older. Fewer women in New York used tobacco than did women in the rest of the United



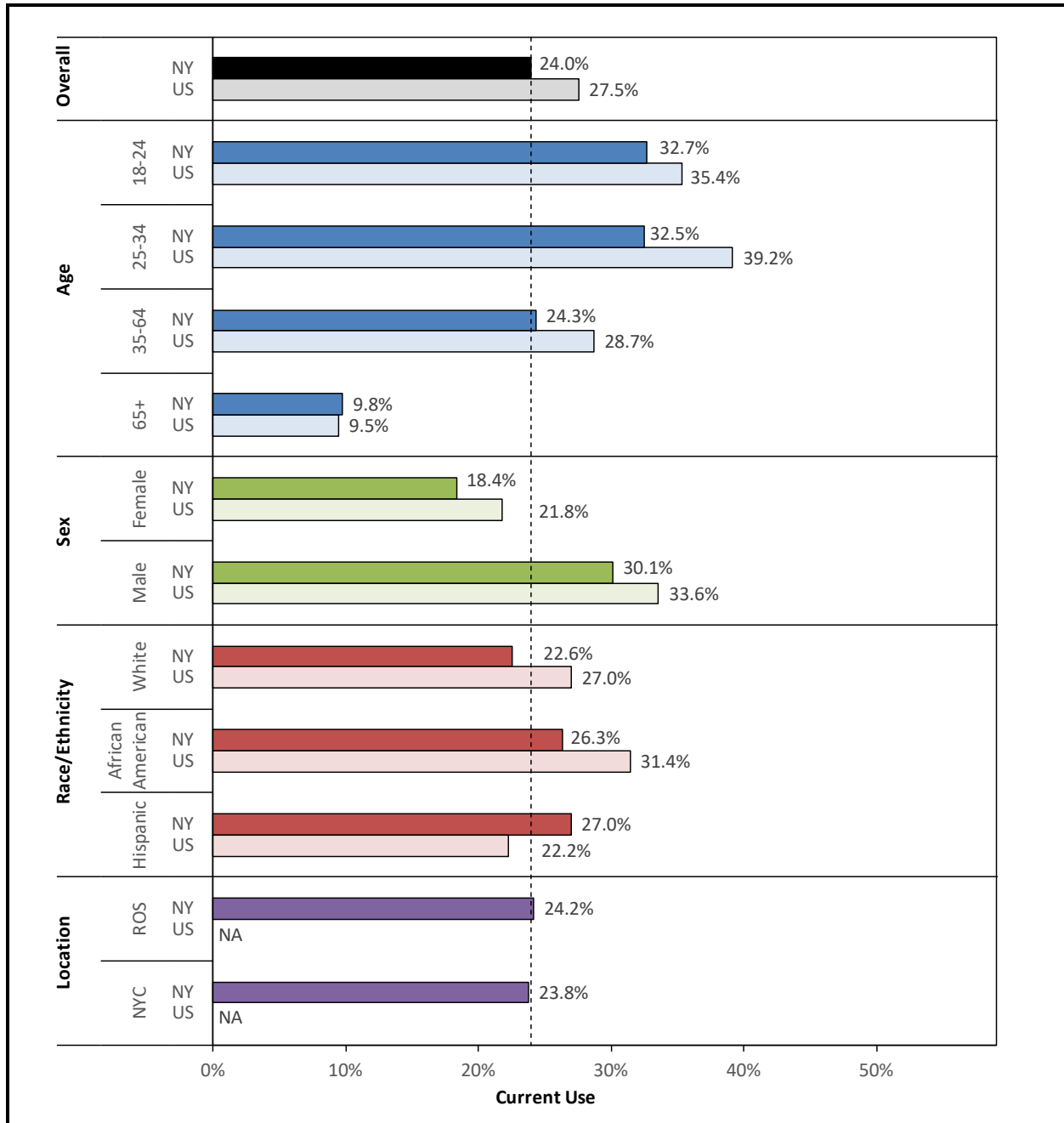
States. Men in New York were more likely than women in New York to use tobacco.

Non-Hispanic white adults in New York were less likely to use tobacco than those in the rest of the United States. Hispanic and non-Hispanic African American adults in New York were more likely to use tobacco than non-Hispanic white adults in New York. Overall prevalence of tobacco use was similar in New York City and the rest of the state.

As shown in **Figure 12**, fewer New York adults with a high school education or GED used tobacco than those with a similar level of education in the rest of the United States. Within New York, lower educational attainment was a risk factor for tobacco use. Adults with less than a high school education, a high school education or GED, or some college were all more likely to use tobacco than those with a college degree or higher. Adults without health insurance in New York were less likely than adults without insurance in the rest of the United States to use tobacco. Among New Yorkers, adults with no insurance or public insurance were more likely to use tobacco than those with private insurance. Low income New Yorkers making less than \$30,000 per year were less likely to use tobacco than low income adults living in the rest of the United States. Among New Yorkers, lower income was a risk factor for tobacco use. Adults making \$30,000 or less were more likely to use tobacco than those making \$60,000–\$89,999 or \$30,000–59,999, who in turn were more likely to use tobacco than those making \$90,000 or more per year.

Adults with poor mental health in New York were less likely to use tobacco than those in the rest of the United States. Poor mental health was a risk factor for tobacco use in New York. That is, New York adults who self-reported poor mental health were more likely to use tobacco than those who self-reported good mental health. New York adults who identified as gay, lesbian, or bisexual were more likely to use tobacco than those who identified as heterosexual.

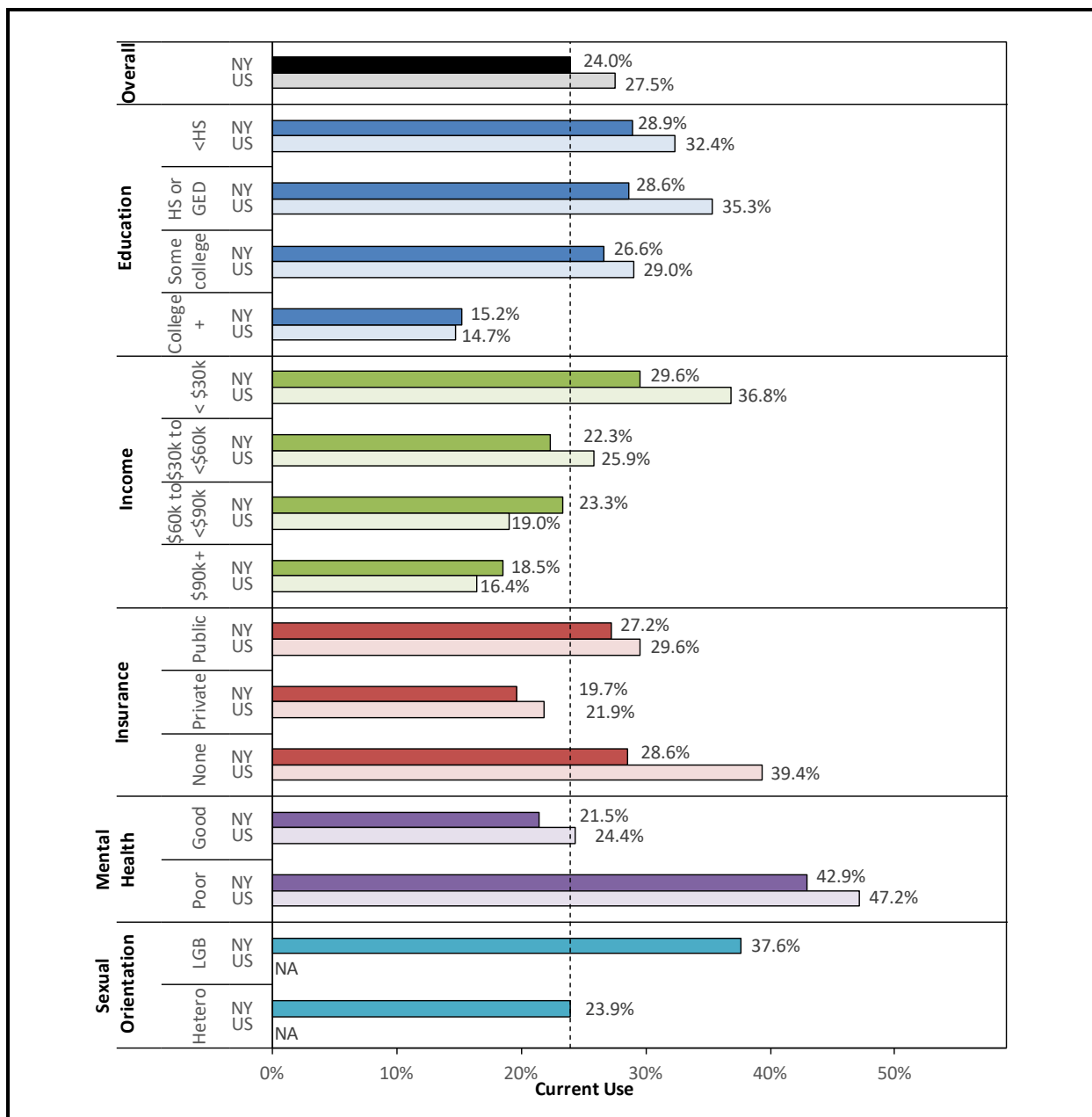
**Figure 11. Any Cigarette, E-cigarette, Hookah, or Cigar Use Overall and by Age, Sex, Race/Ethnicity, and Location, NY ATS and NATS 2015–2016**



Legend: The dotted line denotes the New York overall prevalence. NA = not available; NY = New York State; US = rest of United States.

Notes: There is a statistically significant difference in the prevalence of tobacco use between NY and US (US > NY). There are statistically significant differences in NY by age (18–24, 25–34 > 35–64 > 65+), sex (Male > Female), and race/ethnicity (Hispanic, African American > White). There are statistically significant differences in the US by age (25–34, 18–24 > 35–64 > 65+), sex (Male > Female), and race/ethnicity (African American > Hispanic).

**Figure 12. Any Cigarette, E-cigarette, Hookah, or Cigar Use Overall and by Education, Health Insurance, Income, Mental Health Status, and Sexual Orientation, NY ATS and NATS 2015–2016**



Legend: The dotted line denotes the New York overall prevalence. HS = high school; LGB = lesbian, gay, or bisexual; NA = not available; NY = New York State; US = rest of United States.

Notes: There is a statistically significant difference in the prevalence of tobacco use between NY and US (US > NY). There are statistically significant differences in NY by education (HS, Less than HS, Some college > College+), income (Less than \$30,000 > \$60,000–\$89,999, \$30,000–\$59,999 > \$90,000+), insurance type (None, Public > Private), mental health status (Poor > Good), and sexual orientation (LGB > Heterosexual). There are statistically significant differences in the US by education (HS > Some College > College+; Less than HS > College+), income (Less than \$30,000 > \$30,000–\$59,999 > \$60,000–\$89,999, \$90,000+), insurance type (None > Public > Private), and mental health status (Poor > Good).

# Summary and Conclusions

## Which Adults Are Most at Risk in New York?

As shown in **Table 2**, patterns of tobacco use by age, race/ethnicity, location, and income were inconsistent. However, adults who were male, had less education, had no health insurance, had poor mental health, or were not heterosexual were more likely to use tobacco products than their counterparts.

**Table 2. Groups at Highest Risk of Using Each Type of Tobacco among Adults Living in New York**

		Highest Risk for Use of ...				
		Cigarettes	E-cigarettes	Hookah	Cigars	Any Product
Age	18–24	—	●	●	●	●
	25–34	●	●	—	●	●
	35–64	●	—	—	—	—
	65+	—	—	—	—	—
Sex	Female	—	—	—	—	—
	Male	●	●	●	●	●
Race/Ethnicity	White	●	—	—	—	—
	African American	●	—	●	—	●
	Hispanic	—	—	●	●	●
NYC vs. ROS	ROS	—	—	—	—	—
	NYC	—	—	●	—	—
Education	<HS	●	—	—	—	●
	HS or GED	●	●	—	—	●
	Some college	—	●	●	—	●
	College+	—	—	—	—	—
Income	< \$30k	●	—	—	●	●
	\$30k to <\$60k	—	—	—	—	—
	\$60k to <\$90k	—	—	—	—	—
	\$90k+	—	—	—	●	—

(continued)

**Table 2. Groups at Highest Risk of Using Each Type of Tobacco among Adults Living in New York (continued)**

		Highest Risk for Use of ...				
		Cigarettes	E-cigarettes	Hookah	Cigars	Any Product
Insurance	Public	—	—	—	—	●
	Private	—	—	—	—	—
	None	●	—	—	●	●
Mental health	Good	—	—	—	—	—
	Poor	●	●	—	●	●
Sexual orientation	LGB	●	●	●	●	●
	Heterosexual	—	—	—	—	—

Legend: ● = Highest percentage among statistically significant differences; — = all other categories. HS = high school; LGB = lesbian, gay, or bisexual; NYC = New York City; ROS = rest of state.

Note: For cigarette use, the lowest income category is “<\$35k” and “None” is relative to “Yes, insured.”

## How Does New York Compare with the United States?

Adults in New York and the United States were similarly likely to use cigarettes, e-cigarettes, hookah, and cigars when considering each product individually using data pooled across 2015 and 2016. However, adults in New York were less likely to use any tobacco (that is, any of the four products) than adults in the rest of the United States in 2015–2016 and were less likely to smoke cigarettes in 2016.

## Conclusion

The following groups were consistently at high risk for most or all types of tobacco use and thus are important to consider when designing tobacco use interventions:

- Males
- Adults with poor mental health
- Lesbian, gay, or bisexual adults

These groups were often at risk for tobacco use, although not as consistently as the groups above:

- Younger adults

- African Americans
- Adults with less education
- Adults without health insurance
- Low income adults

Designing effective interventions focused on one or more of these groups could be challenging. Often, the fundamental factors that lie behind their elevated level of risk are very difficult to change. For example, discrimination serves as a stressor that can be associated with higher prevalence of tobacco use among racial/ethnic minority groups and lesbian, gay, or bisexual adults<sup>42,43</sup>; that discrimination cannot be changed simply via an anti-smoking campaign. There are significant biological reasons why adults with poor mental health might be more likely to use tobacco.<sup>41</sup>

However, identifying at-risk groups can hopefully be a first step toward the creation of effective interventions. To maximize the chance of any intervention's relevance and success, members of affected communities should be part of the development process.<sup>1</sup>

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# Appendix A: Data Sources, Measures, and Analyses

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## Description of Data Sources

This study uses pooled data from four 2015–2016 cross-sectional surveys of adults: New York Behavioral Risk Factor Surveillance Survey, National Health Interview Survey, New York Adult Tobacco Survey, and the national comparison Adult Tobacco Survey. Pooling 2015 and 2016 data allows for more stable estimates and results in stronger tests of significance.

### *New York Behavioral Risk Factor Surveillance Survey*

The Centers for Disease Control and Prevention’s (CDC’s) Behavioral Risk Factor Surveillance System (BRFSS) is a state representative survey of topics related to health and health care. All 50 states, the District of Columbia, and 3 territories participate in the survey, and BRFSS is the largest continuously conducted telephone health survey in the world.<sup>44</sup> New York has conducted BRFSS surveys since 1985; however, a sample design and weight change implemented in 2009 prevent comparisons of results with earlier surveys. These changes in sample design and weighting were extended to all states in 2011. Estimates of smoking prevalence in New York come from a core set of BRFSS tobacco-related questions. The New York State Department of Health collaborates with CDC to conduct New York’s BRFSS. CDC provides support for instrument development, sampling, and data weighting. The data are generalizable to the adult population in New York State.

### *National Health Interview Survey*

The National Center for Health Statistics, part of CDC, administers the National Health Interview Survey (NHIS), a personal household interview survey which monitors health trends in the civilian, noninstitutionalized population of the United States. NHIS, which has been conducted every year since 1957, is revised every 10 to 15 years to better reflect the changing atmosphere of health concerns. The most recent revision was implemented in 1997 and includes four core components: the household, the

family, a randomly selected adult (“Sample Adult,” 18 years or older), and a randomly selected child (“Sample Child,” if any children are present). Estimates of smoking prevalence in the United States come from the Sample Adult questionnaire. The data are generalizable to the adult population in the United States.

### ***New York Adult Tobacco Survey***

The New York Adult Tobacco Survey (ATS) is a cross-sectional survey, developed through cooperation between RTI International and the NY Tobacco Control Program, which has been administered quarterly by phone to a stratified, random sample of noninstitutionalized adults in New York State since June 2003 (except in 2013). The ATS provides is designed to inform the efforts of the NY Tobacco Control program by assessing tobacco use, as well as tobacco-related attitudes, beliefs, and behaviors. After creating annual weights that account for nonresponse and sampling methods, and adjustments by geography, age, gender, race/ethnicity, and educational attainment, the sample is generalizable to adults in New York State as a whole, in New York City, and in the rest of the state.

### ***National Adult Tobacco Survey***

New York’s state-sponsored National Adult Tobacco Survey (NATS) was developed through cooperation between RTI International and the NY Tobacco Control Program. Although this telephone survey was initially fielded quarterly (between October 2007 and December 2010), the waves included in this study were collected annually. Topics included in NATS are similar to those found in the ATS. NATS data include responses from a stratified, random sample of noninstitutionalized adults (aged 18 years or older) in all states, including New York. Weighting procedures accounted for nonresponse and sampling methods, and adjusted by region, age, gender, race/ethnicity, and educational attainment. The resulting data are generalizable to the adult population in the United States or, by omitting New York State respondents, to the adult population in the rest of the United States (e.g., all states excluding New York).

## Measures

**Current cigarette use** is defined as having smoked at least 100 cigarettes in the participant’s lifetime and currently smoking every day or some days.

**Current e-cigarette use** indicates currently using every day, some days, or rarely. **Current hookah and cigar use** also indicate every day, some day, or rarely using.

**Current tobacco use** indicates current use of cigarettes, e-cigarettes, hookah, and/or cigars. Note that this definition only relates to the four tobacco products reviewed in this report; other tobacco products (e.g., smokeless tobacco) are not included.

**Age**, collected as continuous measures, is categorized into 18- to 24-year-olds, 25- to 34-year-olds, 34- to 64-year-olds, and 65 years or older.

**Sex** is defined as either male or female.

**Race/ethnicity** is categorized as white, non-Hispanic; African American, non-Hispanic; and Hispanic respondents. Of note, NY-BRFSS and NHIS race/ethnicity is defined among those indicating white-only and African American-only among non-Hispanic respondents. In contrast, NY ATS and NATS consider respondents “primary” or “best” race selections when more than one race is reported.

**Location** differentiates New York City (NYC) and the rest of the state (ROS) respondents within the NY ATS. NYC includes the five boroughs (Manhattan, Queens, Brooklyn, the Bronx, and Staten Island).

**Education** is categorized as those with less than a high school education, those who graduated from high school or obtained their GED, those with some college experience, and those with a college degree or higher.

**Income** categories for NY-BRFSS and NHIS are different from NY ATS and NATS. For this analysis, income is categorized as less than \$35,000; \$35,000 to \$74,999; and \$75,000 or more. In NY ATS and NATS, income is categorized as less than \$30,000; \$30,000 to \$59,999; \$60,000 to \$89,999; and \$90,000 or more. Even though

categorical differences exist between the two surveys, we are still able to draw conclusions by comparing low- and high-income respondents across data sources.

**Health insurance** categories for NY-BRFSS and NHIS are different from NY ATS and NATS. In NY-BRFSS and NHIS, insurance is categorized as “Yes, insured” or “No, not insured.” In NY ATS and NATS, insurance status is categorized as uninsured, privately insured, or publicly insured.

**Mental health** is defined by responses to the question: “Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?” We define “good” mental health as those who report fewer than 14 days of “poor” mental health.

**Sexual orientation** definitions differ across data sources. Specifically, NY-BRFSS includes the question: “Do you consider yourself to be straight, lesbian or gay, bisexual, or other?” NHIS asks, “Which of the following best represents how you think of yourself? Lesbian or gay; straight, that is, not lesbian or gay; bisexual; or something else.” NY ATS includes, “Because New York State wants to ensure that this survey reflects the diversity of the state, I’d like to ask you: Do you think of yourself as... Heterosexual or straight; Gay, lesbian or homosexual; or Bisexual.” For each source, respondents are categorized as heterosexual if responding “straight” or “heterosexual.” And, respondents are categorized as lesbian, gay, or bisexual if responding “gay,” “lesbian or gay,” “bisexual,” or “something else.”

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## Analytic Approach

For our analyses, we used pooled data to compare the overall prevalence of tobacco use between New York State and the United States as a whole or the rest of the United States depending on the data source. For each geography, we then conducted omnibus tests of significance for each use-outcome by demographic measure using the adjusted-Wald test to account for complex survey design.

If the omnibus test for independence of the use-outcome and demographic measure was statistically significant, we then tested for pairwise differences between each demographic group (e.g., 18- to 24-year-olds versus 25- to 34- year-olds among New York State adults) using the adjusted-Wald tests. Statistically significant differences described in the text reflect the results of the pairwise (rather than the omnibus) tests.

We used Stata 14 analytic software. All differences noted in the text are statistically significant at  $p < 0.05$ . Of note, despite pooling the data to increase sample sizes, some of the groups of interest have relatively small sample sizes. We suppress estimates if the Relative Standard Error (RSE) is greater than 50, reflecting less reliable estimates, and note with an “S.”



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