

## Key findings

- *There is significant geographical variation in smoking prevalence among adults in New Jersey, with areas in the South having much higher rates.*
- *New Jersey residents who have lower household incomes are more likely to smoke compared to those with higher annual incomes.*
- *People who have attained only a high school education are three times more likely to smoke than those with a college education or higher.*
- *Smoking rates are highest among those between ages 18 and 34, with a rate nearly three times the rate of smoking among residents 65 years and older.*
- *Smoking rates are much higher among people covered by Medicaid and those who are uninsured compared to Medicare beneficiaries or people with private insurance.*

Smoking remains a leading cause of preventable deaths nationally.<sup>1</sup> Smoking causes and exacerbates coronary heart disease, lung and other types of cancers, as well as respiratory and cerebrovascular diseases.<sup>2</sup> Though overall cigarette use has declined in recent decades, smoking-attributable mortality remains high, nationally estimated to be nearly 480,000 annually with cancer, cardiovascular and metabolic diseases, and pulmonary diseases as leading causes of death.<sup>2</sup> In New Jersey from 2000 to 2004 there were 153,577 smoking-attributable years of potential life lost (YPLL) in adults ages  $\geq$  35.<sup>3</sup> Nationally, smoking is also responsible for other significant system-wide costs, with annual economic burden of direct medical cost and indirect cost due to lost productivity from 2009 to 2012 estimated to be between \$289.0 and \$332.5 billion.<sup>2</sup> By 2010, 8.7% of the annual adult U.S. healthcare expenditure could be linked to smoking related conditions, with more than 60% of such spending covered by public payers.<sup>4</sup>

*Healthy People 2020*, a report of the U.S. Department of Health and Human Services, made smoking reduction a national priority, with the goal of reducing national adult smoking prevalence to  $\leq$  12%.<sup>5</sup> New Jersey's health improvement plan, *Healthy New Jersey 2020*, also highlights tobacco reduction as one of the

state's main priorities, with the goal of reducing state smoking prevalence to  $\leq$  13.6% by 2020.<sup>6</sup> According to the Centers for Disease Control and Prevention, in 2011 New Jersey ranked third lowest among states with smoking prevalence (16.8%), lower than the national average (21.2%).<sup>7</sup>

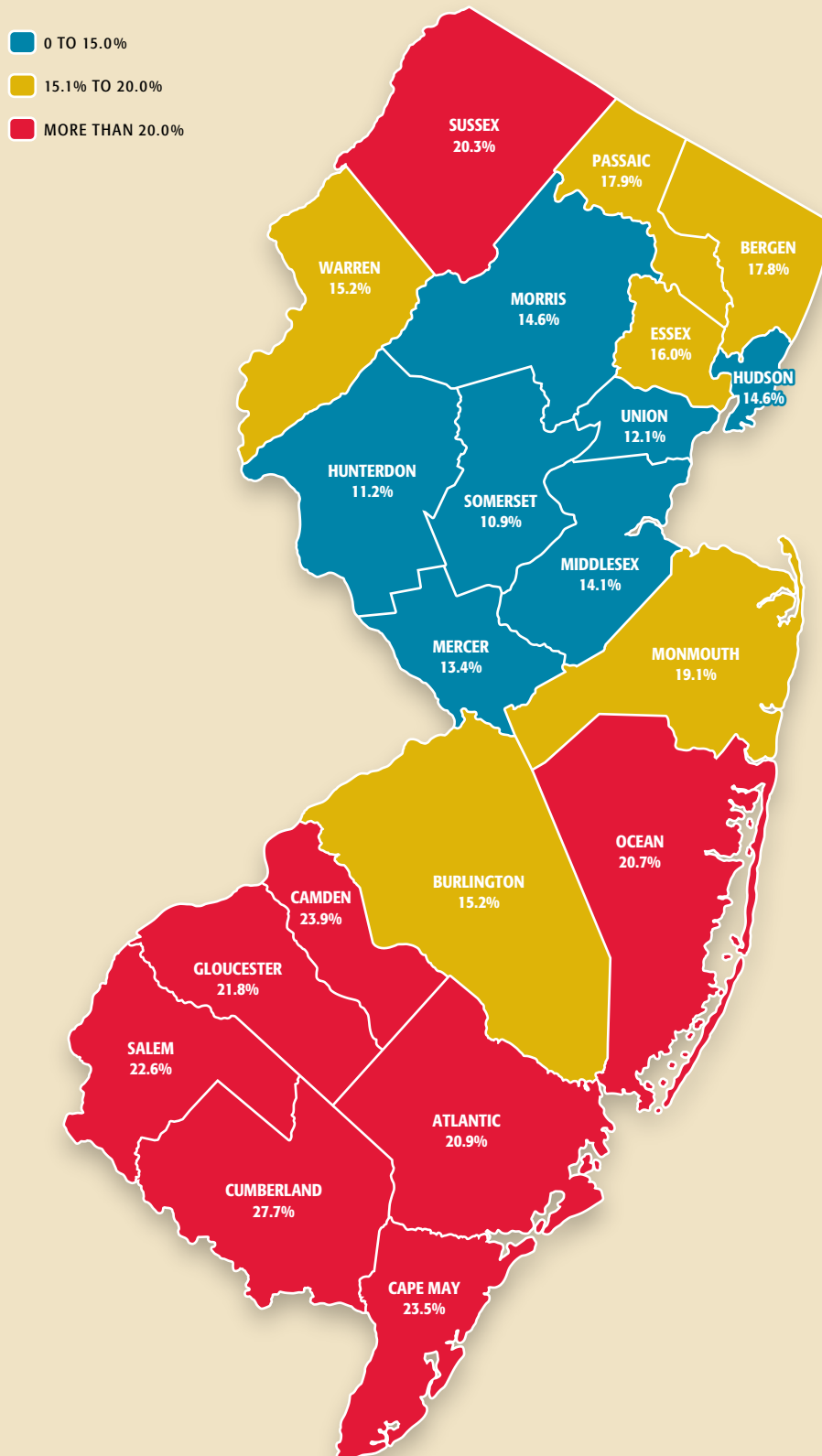
## Findings

The analysis reported in this Facts & Findings focuses on smoking rates in New Jersey using the most current available (January 2012–June 2013) Behavioral Risk Factor Surveillance System (BRFSS) data. These data show that 17.0% of adults (n=1,102,082) statewide identify themselves as current smokers,<sup>i</sup> of whom 68.1% report that they smoke every day.

There is wide regional variation in smoking prevalence, with southern regions of the state having the highest smoking rates. The rate is highest in southern New Jersey, with 23% of residents in the Southeast (Cape May, Cumberland, Salem, and Atlantic counties) and 20% in the Southwest (Gloucester, Camden, and Burlington counties) reporting that they are current smokers. The proportion of adults, by county, who report that they are current smokers is presented in Figure 1.

<sup>i</sup> A respondent is considered a smoker if he/she has smoked at least 100 cigarettes in his/her lifetime and he/she currently smokes every, or some, days.

Figure 1 | **Current Smoking Prevalence by County**

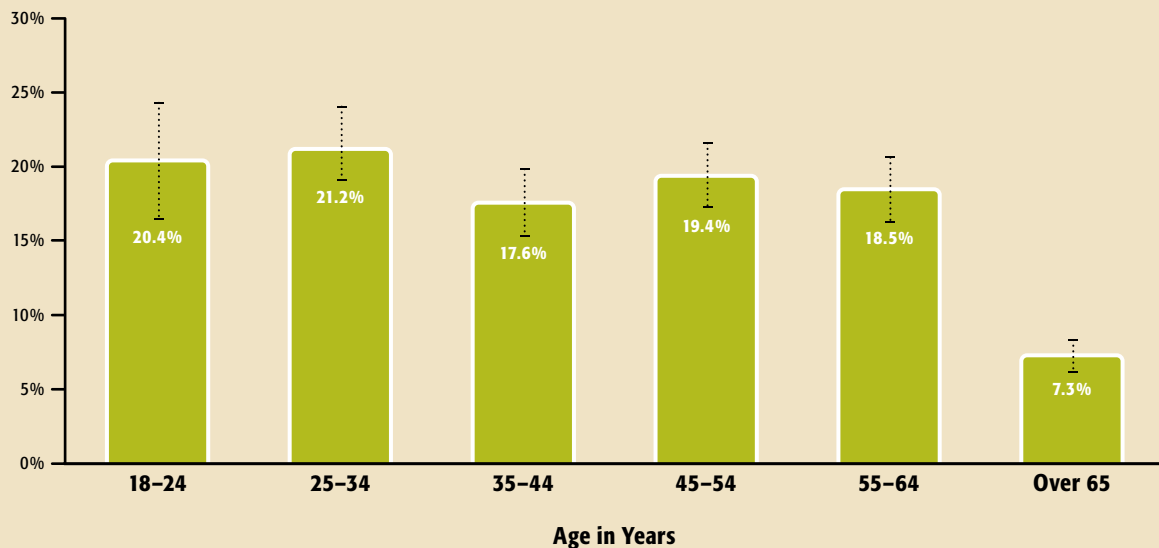


NJ-BRFSS, JANUARY 2012–JUNE 2013

Younger New Jersey residents are more likely to smoke than their older counterparts, with nearly 20% of adults between 18 and 34 years reporting they currently smoke, compared to 7% of people over 65 years (Figure 2). As

Figure 3 shows, smoking rates also vary by race/ethnicity, with prevalence highest among non-Hispanic Blacks (21%), followed by Whites (18%), Hispanics (16%), and non-Hispanic Asians (8%).

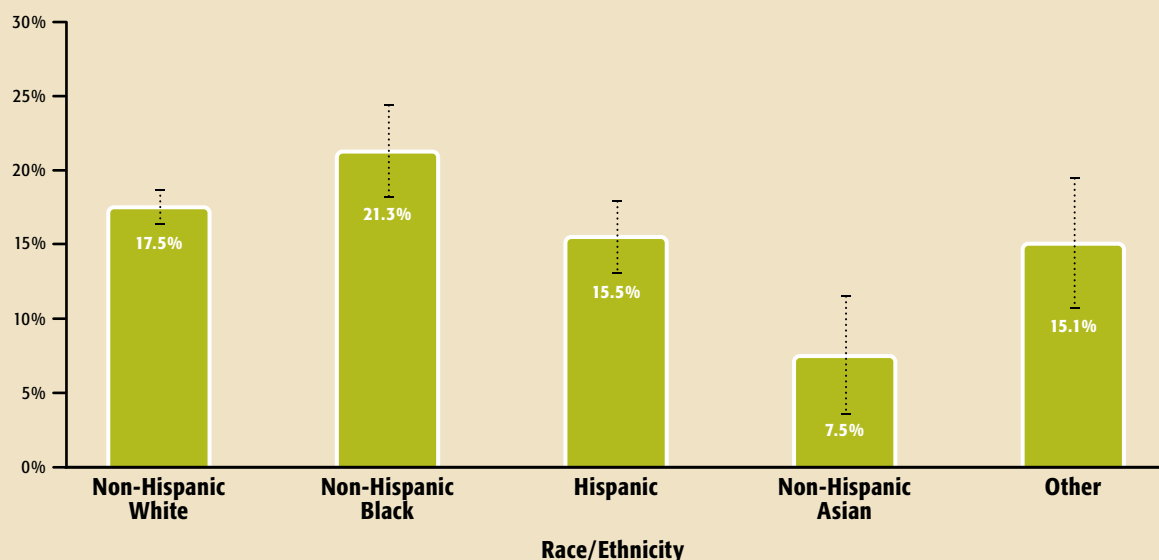
Figure 2 | **Adult Smoking Prevalence by Age**



Note: Based on sampled adults age 18 and older. Tabulations are weighted to account for BRFSS design effects and 95% confidence intervals are shown.

NJ-BRFSS, JANUARY 2012-JUNE 2013

Figure 3 | **Adult Smoking Prevalence by Race/Ethnicity**



Note: Based on sampled adults age 18 and older. Tabulations are weighted to account for BRFSS design effects and 95% confidence intervals are shown.

NJ-BRFSS, JANUARY 2012-JUNE 2013

Table 1 provides smoking rates for various demographic groups. The smoking rate among males is 25% higher than that of females. People who are divorced/separated or single are much more likely (23%) to smoke compared to those who are married (14%) and widowed (13%). Smoking rates also vary by income. Nearly one-quarter of people with annual household income less than \$25,000 and one-fifth of people with income between \$25,000 and \$50,000 smoke. Smoking rates are considerably lower (11%) for people whose income is greater than \$75,000 per year. Smoking rates are nearly three times lower among those who completed college (8%) compared to adults who did not complete high school (25%). Additionally, adults who have a college or higher degree are half as likely to smoke compared to those who enrolled in but did not complete college.

Table 1 | **Smoking Prevalence by Demographics**

Demographic Characteristics	Percent Who Smoke	95% Confidence Interval
<b>Total</b>	17.0%	16.0%, 18.0%
<b>Gender</b>		
Male	19.6%	18.0%, 21.1%
Female	14.6%	13.5%, 15.8%
<b>Marital Status</b>		
Married, Coupled	13.5%	12.3%, 14.6%
Divorced, Separated	23.3%	20.5%, 26.0%
Widowed	12.5%	10.0%, 14.9%
Single, Never Married	23.2%	20.9%, 25.5%
<b>Annual Household Income</b>		
Less than \$25,000	24.0%	21.5%, 26.4%
\$25,000 to less than \$50,000	21.4%	18.9%, 23.9%
\$50,000 to less than \$75,000	17.3%	14.7%, 19.9%
More than \$75,000	11.4%	10.0%, 12.7%
Don't Know or Refused	15.0%	12.6%, 17.5%
<b>Education</b>		
Did Not Graduate High School	25.1%	21.4%, 28.8%
Graduated High School	23.4%	21.3%, 25.4%
Attended College or Technical School	17.9%	16.0%, 19.9%
Graduated from College or Technical School	8.4%	7.3%, 9.5%

Note: Based on sampled adults age 18 and older and tabulations are weighted to account for BRFSS design effects.

NJ-BRFSS, JANUARY 2012–JUNE 2013

With smoking associated with adverse birth outcomes, it was of interest to assess rates of smoking among reproductive age and pregnant women (Table 2).<sup>8</sup> Among adult women between ages 18 and 44 years, prevalence of smoking is 15%, which is not significantly different from rates of smoking among women older than 44 years (14%). Smoking prevalence reported by pregnant women is lower (7%) than that among women who are not pregnant (16%).<sup>ii</sup> However, having a child in the household does not appear to be a deterrent to smoking, with 17% of both adults with and without children in the household reporting that they are current smokers.

Table 2 | **Smoking Prevalence - NJ BRFSS, 2012–2013**

	Percent Who Smoke	95% Confidence Interval
<b>Child in Household</b>		
Yes	16.9%	15.3%, 18.5%
No	17.1%	15.9%, 18.3%
<b>Women by Age Group</b>		
Under 44	14.2%	12.8%, 15.5%
18–44	15.4%	13.4%, 17.4%
<b>Pregnancy Status</b>		
Pregnant	7.0%	0.9%, 13.0%
Not Pregnant	15.7%	13.8%, 17.7%

Note: Based on sampled adults age 18 and older and tabulations are weighted to account for BRFSS design effects.

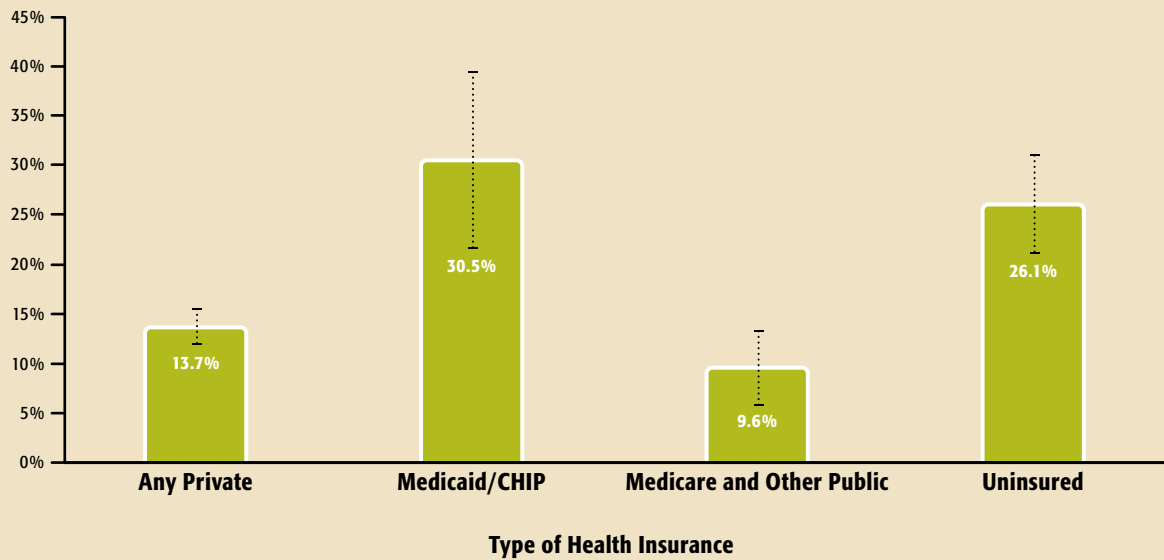
NJ-BRFSS, JANUARY 2012–JUNE 2013

<sup>ii</sup> This observation is consistent with a 2014 report using New Jersey Pregnancy Risk Assessment Monitoring System data which show smoking prevalence in pregnancy is approximately 7%.

Data from the Center for State Health Policy, 2009 New Jersey Family Health Survey (NJFHS), show wide variation in smoking rates by health insurance status, with 26% among the uninsured adults smoking compared to 14% among adults who have any source of health insurance. There is also variation in smoking rates by type of coverage

as shown in Figure 4. Most notably, smoking prevalence among Medicaid/NJ FamilyCare recipients (31%) is more than twice the smoking rate among people with private insurance (14%), including employer-sponsored plans, and is three times the smoking rate among people with other public insurance (10%) consisting mainly of those with Medicare.

Figure 4 | **Adult Smoking Prevalence by Insurance Type**



Note: Based on sampled adults age 18 and older. Tabulations are weighted to account for NJFHS design effects and 95% confidence intervals are shown.

2009 NEW JERSEY FAMILY HEALTH SURVEY

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## Conclusions

Whereas smoking rates have been declining, smoking still remains a primary cause of preventable death and poses an economic burden on the healthcare system.<sup>2,3</sup> Similar to previous findings nationally, we show that lower income and less education are tied to higher rates of smoking, and rates are higher in certain groups in New Jersey, including younger adults, non-Hispanic Blacks and Whites, and men.<sup>9-11</sup> There are also notable geographical differences in smoking rates, with southern parts of New Jersey having higher smoking prevalence. One group that has particularly high smoking prevalence is the Medicaid/CHIP population. With smoking prevalence nearly three times that among enrollees in other public plans, Medicaid recipients are at greater risk for smoking-related health conditions.

The variations observed in smoking rates across demographic groups point to populations where smoking prevention and cessation efforts should be targeted. With national, state, and local health agencies focusing on smoking reduction as a means to promote population

health, there should be renewed focus not only on lowering overall smoking prevalence but also on understanding and eliminating disparities in smoking rates.

Additionally, whereas overall smoking prevalence among pregnant women is only 7%, it is concerning that 15% of reproductive-age women smoke and that smoking rates are not lower among families with children. Based on a 2014 New Jersey Pregnancy Risk Assessment Monitoring System report, of the women who smoke before pregnancy, only 1.4% quit before knowing their pregnancy status and 8.4% quit after becoming aware of their pregnancy.<sup>12</sup> Smoking presents various threats, such as increased risk of miscarriage and chances of the baby having various cardiovascular, nervous system, musculoskeletal, and facial defects.<sup>13</sup> In light of the fact that fetal development is affected at the earliest stages of pregnancy, strategies to reduce smoking among women of reproductive age or who might become pregnant (intended or unintended) might help reduce smoking-related adverse birth outcomes.

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## References

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## Methods

The Behavioral Risk Factor Surveillance System (BRFSS) is a national random-digit-dialed telephone survey of adults age 18+ randomly selected from all adults in the household (2012 NJ sample: 11,317 adults; January–June 2013 NJ sample: 5,807 adults). Interviews were conducted with both cell phone and landline samples. The 2012 and 2013 BRFSS surveys included three parts: the core component, the optional CDC modules, and state-added questions, including new health care access items for New Jersey added by Rutgers Center for State Health Policy researchers. The dataset for this analysis is restricted to non-institutionalized New Jersey adults who live in households. The core BRFSS component provides information about smoking status and the other variables included in analysis. All results reported here use weighted data; significant results are reported in the text at the  $p < .05$  level. Missing values (don't know, refused) are not shown if less than 5%. Detailed tables showing significance tests of comparisons are available from the authors upon request.

An overview of the BRFSS with more detailed methods is available at [http://www.cdc.gov/brfss/annual\\_data/2012/pdf/Overview\\_2012.pdf](http://www.cdc.gov/brfss/annual_data/2012/pdf/Overview_2012.pdf).

Analysis of smoking status by type of insurance was conducted using the 2009 New Jersey Family Health Survey (NJFHS). This survey was designed to provide population-based estimates of health care coverage, access, use, and other health topics important for New Jersey policy formulation and evaluation. It was funded by the Robert Wood Johnson Foundation and designed and analyzed by Rutgers Center for State Health Policy. The survey, conducted between November 2008 and November 2009, was a random-digit-dialed telephone survey of 2,100 families with landlines and 400 families with cell phones residing in New Jersey. The adult who was most knowledgeable about the health and health care needs of the family was interviewed. It collected information about a total of 7,336 individuals and had an overall response rate of 45.4%. Smokers were identified through response to the following question: Do you (or does anyone in your household) smoke cigarettes, cigars, or pipes? People who responded “Yes” to the question were considered smokers. The survey also inquires about insurance status and type of insurance. All estimates presented are weighted to accurately reflect the New Jersey household population.

Further information on the 2009 NJFHS, including a comprehensive methods report and the full text of the survey questionnaire, can be found on the Center's website:

[The 2009 New Jersey Family Health Survey Methods Report](#)  
[The 2009 New Jersey Family Health Survey Questionnaire](#)

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Center for State Health Policy

112 Paterson Street, 5th Floor  
New Brunswick, NJ 08901

[www.cshp.rutgers.edu](http://www.cshp.rutgers.edu)

For more information email [CSHP\\_Info@ifh.rutgers.edu](mailto:CSHP_Info@ifh.rutgers.edu)

### Contributing to this issue:

Sana Ahmad, Research Assistant

Derek DeLia, PHD, Associate Research Professor