CANCER BRIEF: Tobacco Use and Cancer Deaths-the Preventable Epidemic

Brief #5, Winter 2013

This *Cancer Brief* is one of a series of examinations of cancer in New York. Each of these *Briefs* offers policymakers and the public information on how best to combat cancer or its impacts on patients through policy changes.

Problem: **Over 9,600 New Yorkers are estimated to have died from cancers caused by smoking.**

Solution: **Beginning this year, NY should increase its anti-tobacco funding to $85 million. The Legislature should reject the governor's apparent cut.**

Finding: It is estimated that 9,610 New Yorkers died from cancers caused by smoking. This represents more than one in four (28 percent) of the total number of cancer deaths in New York (34,816[1]). Tobacco costs New Yorkers $8.17 billion in New York health care, including Medicaid expenditures of $5.47 billion, about half of which cost is absorbed by state taxpayers.[2] Our analysis of the most recent cancer deaths and smoking data available show that a staggering number of cancer deaths are caused by smoking in New York.[3]

Estimated Numbers of Cancer Deaths from Smoking in New York

Type of Cancer	Estimated Deaths Caused by Smoking
Lung & Bronchus	7,115
Esophagus	600
Pancreas	519
Urinary Bladder	386
Oral Cavity	298
Larynx	203
Kidney	184
Stomach	175
Acute Myeloid Leukemia	102
Uterine Cervix	28
Total	**9,610**

[1] New York State Department of Health, Cancer Registry (http://www.health.ny.gov/statistics/cancer/registry/table2/tb2totalnys.htm. Accessed 12/11/12.

[2] U.S. Centers for Disease Control and Prevention (CDC), "Best Practices for Comprehensive Tobacco Control Programs – 2007, October 2007, p. 90 (NY). See: http://www.cdc.gov/tobacco/stateandcommunity/best_practices/pdfs/2007/BestPractices_Complete.pdf.

[3] Calculations by the American Cancer Society on CDC's Smoking-Attributable Mortality, Morbidity, and Economic Costs (SAMMEC) system (https://apps.nccd.cdc.gov/sammec/index.asp), using 2009 data. Smoking prevalence rates were estimated based on BRFSS data. Surveillance, Epidemiology, and End Results (SEER) Program (www.seer.cancer.gov) SEER*Stat Database: Mortality - All COD, Aggregated With State, Total U.S. (1969-2009) <Katrina/Rita Population Adjustment>, National Cancer Institute, DCCPS, Surveillance Research Program, Surveillance Systems Branch, released April 2012. Underlying mortality data provided by NCHS (www.cdc.gov/nchs).

Lung cancer accounts for three quarters of the smoking-attributable cancer deaths in New York. Lung & bronchus cancer is one of the most common malignancies in the world, and is the leading cause of cancer death in men and women in the United States and in New York. The incidence rate of lung cancer in men has fallen more than 30 percent from a high point in 1984, mirroring a decline in smoking by men that began in the 1960s. Female lung cancer rates began decreasing in 2003 after continuously increasing for 70 years. Gender differences in the incidence of smoking-attributable cancer deaths reflect historical differences in population uptake and then reduction of cigarette smoking between men and women over the past 50 years.[4]

While most people are aware that smoking is the principal cause of lung cancer, it is in fact responsible for 2,500 additional deaths due to other cancers. The 2004 U.S. Surgeon General's report, The Health Consequences of Smoking, identified ten cancers for which the "evidence was sufficient to infer a causal relationship" between smoking and incidence of the disease.[5] The Surgeon General found that smoking caused a significant percentage of cancers occurring in the lung, larynx, oral cavity and pharynx, esophagus, pancreas, bladder, kidney, uterine cervix, stomach, and acute myeloid leukemia.

Lung cancer in New York: A "Tale of Two States"

New York State has a higher cancer *incidence* rate (annual number of new cancer cases per 100,000 population) than the nation as a whole. However, New York has a lower cancer *mortality* rate (number of deaths due to cancer per 100,000 population). The state's lower mortality rate is largely driven by a reduced incidence of lung cancer, one of the deadliest forms of the disease, and that reduction is due to significantly lower rates of lung and other tobacco-caused cancers in New York City and the immediate surrounding area. New York City's significantly lower lung cancer incidence and mortality rates (almost one-fifth lower than the national average) drives down the state's overall cancer mortality rate.

Men living in the counties of Cayuga, Chemung, Clinton, Cortland, Franklin, Greene, Jefferson, Niagara, Oswego, Rensselaer, St. Lawrence, Schuyler, Steuben, and Washington have lung cancer rates higher than the state average. By contrast, men residing in Bronx, Brooklyn, Manhattan, Nassau, Queens, Rockland, and Westchester have rates below the state average.[6]

Women residing in Chemung, Clinton, Fulton, Greene, Jefferson, Madison, Niagara, Oneida, Onondaga, Oswego, Putnam, Rensselaer, St. Lawrence, Seneca, Sullivan,

[4] American Cancer Society, "Cancer Facts & Figures, 2012." Atlanta: American Cancer Society; 2012
[5] U.S. Department of Health and Human Services, "The Health Consequences of Smoking: A Report of the Surgeon General, 2004," Executive Summary, pages 8 and 9.
[6] New York State Cancer Registry, 2011.

Warren, and Washington experience the highest rates of lung cancer. Women living in Bronx, Brooklyn, Manhattan, and Queens have the lowest lung cancer rates.[7]

A closer examination shows that upstate New York (in the aggregate) also has *higher* smoking rates than downstate. It is likely that this difference is the result of New York City's strong public health and tobacco control programs – programs that are a model for the rest of the state and the nation.[8]

New York should invest more of its tobacco revenue in prevention and control.

New York's cigarette excise tax is $4.35 per pack. In the fiscal year ending March 31, 2012, the state collected $1.6 billion in excise taxes on cigarettes and other tobacco products. The City of New York imposes an additional tax of $1.50 per pack on sales there. Additionally, in 2012 the state received payments from tobacco product manufacturers totaling $369 million arising from the Master Settlement Agreement (MSA). New York's counties received almost as much. These taxes and the cost of the MSA payments are borne not by the manufacturers but by tobacco consumers in the form of higher prices. In exchange, they get little state government help in quitting.

New York has raised billions from tobacco and spent little on tobacco control

Fiscal Year	Amount spent on tobacco control (millions)[9]	Total revenue from tobacco[10] (billions)	Revenue from tobacco taxes[11] (millions)	Revenue from tobacco settlement[12] (millions)
FY 2007	$85.5	$1.4b	$980.6	$396.7
FY 2008	$85.5	$1.4b	$1b	$427.3
FY 2009	$80.4	$1.9b	$1.4b	$469.4
FY 2010	$55.2	$1.8b	$1.4b	$391.3
FY 2011[13]	$58.4	$1.9b	$1.5b	$370.4
FY 2012[14]	$41.4	$1.96b	$1.6	$361.7
FY 2013[15]	$41.4	$2.45b	$2.08b (est)	$368.9
Total	**$447.8**	**$12.8b**	**$9.96b**	**$2.79b**

As seen above, New York has raised $12.8 billion in tobacco revenues over the past seven years, but only 3.5 percent was spent on tobacco control programs. Worse, over the past four years funding for the tobacco control program has been cut in half (last

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[7] *Id.*
[8] For a more detailed examination of this issue, see: "The Cancer Burden in New York State," American Cancer Society, July 2012. Available at: http://www.acscan.org/action/ny/updates/2066/.
[9] Campaign for Tobacco Free Kids, See: http://www.tobaccofreekids.org/research/factsheets/pdf/0209.pdf.
[10] Campaign for Tobacco Free Kids, See: http://www.tobaccofreekids.org/research/factsheets/pdf/0220.pdf.
[11] Calculations by authors, subtracted settlement amounts from total tobacco revenues.
[12] For settlement payments from FY 2007 – 2010, see: http://www.tobaccofreekids.org/research/factsheets/pdf/0365.pdf
[13] For FY 2011, source: http://www.tobaccofreekids.org/research/factsheets/pdf/0219.pdf.
[14] For 2012, New York State Department of Taxation and Finance, Office of Tax Policy Analysis. 2011 – 2012 New York State Tax Collections. August 2012.
[15] For 2013, New York State Division of the Budget. New York State Enacted Budget Financial Plan for Fiscal Year 2012. April, 2012.

year an effort to further cut the program was rebuffed in budget negotiations). In the current fiscal year, New York will spend on tobacco control a mere two percent of tobacco revenues, and only 16 percent of the amount recommended by the CDC.[16]

New York's Efforts to Reduce Tobacco Use

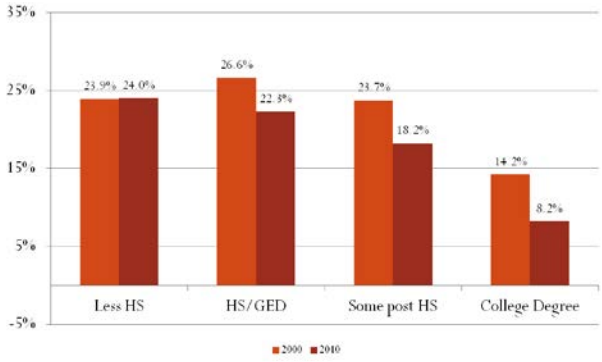
New York's tobacco control program, combined with policy measures including a high tobacco excise tax and public smoking restrictions, has fostered a decline in the rate of tobacco use among both children and adults. Between 2000 and 2010, the prevalence of smoking among high school students fell steadily from 27.1 percent to 12.6 percent, a significantly faster rate than observed in the rest of the country.[17]

Similarly, the adult smoking rate in New York has also fallen faster than in the U.S. as a whole, dropping from 21.6% in 2003 to 15.5% in 2010. The decline in smoking has occurred about equally across all ethnic groups. There is now no significant difference among New York's major racial/ethnic groups in the adult prevalence of smoking. [18]

However, a closer look at the data identifies one disturbing trend: The decline in smoking has not occurred among the poor – those least able to afford the cost of cigarettes and the consequences of addiction.

Smoking among those with less than a high school education was unchanged between 2000 and 2010, a period during which tobacco use significantly declined among all other groups with higher educational attainment. Those with less than a high school education now smoke at a rate three times that of college graduates.

Adult Prevalence of Smoking by Education, 2000-2010[19]



Since 2000, smoking cessation rates have been greater, and smoking prevalence is now lowest, among New Yorkers with incomes over $35,000 a year. Those with

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[16] Budget information from the New York State Division of the Budget, U.S. Centers for Disease Control and Prevention (CDC), "Best Practices for Comprehensive Tobacco Control Programs – 2007, October 2007, p. 90 (NY). See: http://www.cdc.gov/tobacco/stateandcommunity/best_practices/pdfs/2007/BestPractices_Complete.pdf.

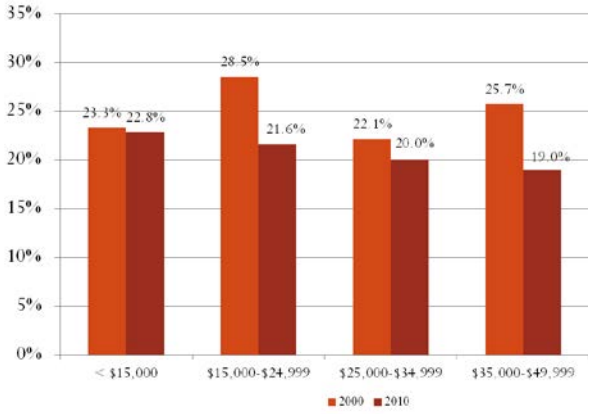
[17] New York State Department of Health. "Smoking among New York high school students continues to decline". *Stat Shot*, V4, No. 1. January 2011.

[18] Information from New York State Department of Health, Tobacco Use Prevention and Control Program.

[19] *Id.*

incomes below $25,000 have the highest smoking rates, and smoking prevalence among the very poorest is practically unchanged in ten years.

Adult Prevalence of Smoking by Income, 2000 - 2010[20]



Among those with household incomes less than $15,000 a year, the smoking rate has not changed in the past 10 years. According to the latest Census, over 13 percent of New York households have incomes below $15,000.[21]

Poorer, less educated individuals live throughout New York. In urban, rural and suburban areas of the state, low income individuals struggle not only with extremely tight finances, but with the financial and health consequences of this powerful addiction as well.

Upstate, rural counties tend to have adult smoking rates higher than the statewide average, especially the Adirondacks and central New York, as well as the Buffalo-Niagara Falls region. All these areas exhibit lower household income and higher rates of poverty.

Tobacco use and all its consequences disproportionately impact the most vulnerable members of society. A recent study found that poor smokers (less than $30,000 in annual household income) spend 24 percent of their income on tobacco products. This population pays more than one-third of state and city cigarette taxes, but they receive little help from the state when they want to quit smoking.[22]

In addition, smoking rates are highest among substance abusers and those with poor self-reported mental health, with prevalence of 30.9 percent among those reporting their mental health in the past month was "Not good," vs. 15.2 percent among those with

[20] *Id.*
[21] U.S. Census Bureau, "Selected Economic Characteristics," New York. Available at: http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk. Income in inflation-adjusted dollars.
[22] Farrelly MC, Nonnemaker JM, Watson KA (2012) The Consequences of High Cigarette Excise Taxes for Low-Income Smokers. PLoS ONE 7(9): e43838. Doi:10.1371/journal.pone.0043838.

good mental health. Smoking causes more deaths among clients in substance abuse treatment than the alcohol or drug use that brings them to treatment.[23]

Reducing smoking among these groups will require more intensive and tailored interventions to address the particular needs of these populations.

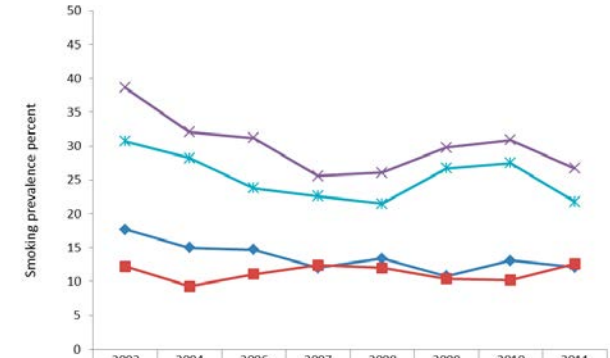
Tobacco's Impact on Medicaid

As mentioned earlier, annual Medicaid expenditures to cover the illnesses caused by smoking are estimated to be $5.47 billion in New York State. Of that total, roughly half of the cost is absorbed by state taxpayers.[24]

Not surprisingly, given the earlier discussion that smoking rates tend to be higher among those with lower incomes, the Medicaid population has higher smoking rates than the general population.

As seen below, while the smoking rate among adult Medicaid beneficiaries has dropped from 39 percent in 2003 to 27 percent in 2011, that smoking rate is significantly higher than the overall smoking rate in New York State of 18 percent.

Smoking Rates in New York by Type of Health Insurance[25]



	2003	2004	2006	2007	2008	2009	2010	2011
Private	17.7	15.0	14.7	12.0	13.4	10.8	13.1	12.1
Medicare	12.2	9.3	11.1	12.4	12.0	10.4	10.2	12.6
Medicaid	38.6	32.1	31.2	25.6	26.1	29.8	30.9	26.7
None	30.7	28.2	23.8	22.6	21.5	26.7	27.5	21.8

Of course, the impact of smoking on Medicaid expenditures is not unique to New York. According to the CDC, "Medicaid recipients are disproportionately affected by tobacco-related disease because their smoking rate is approximately 53% greater than that of the overall U.S. adult population."[26] Clearly, targeting tobacco control programs to

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[23] National Association of State Mental Health Program Directors, "Morbidity and Mortality in People with Serious Mental Illness. Alexandria, VA. 2006.

[24] U.S. Centers for Disease Control and Prevention, "Best Practices for Comprehensive Tobacco Control Programs – 2007, October 2007, p. 90 (NY). See: http://www.cdc.gov/tobacco/stateandcommunity/best_practices/pdfs/2007/BestPractices_Complete.pdf.

[25] New York State Department of Health, Tobacco Control Program, "No Change in Smoking Rates Among Adults in New York with Medicare," StatShot Vol.5, No. 9/November, 2012.

[26] U.S. Centers for Disease Control and Prevention, "State-Level Medicaid Expenditures Attributable to Smoking," Preventing Chronic Disease: Public Health Research, Practice and Policy, Volume 6: No. 3, A84, July 2009.

lower-income populations will not only benefit public health, but help drive down state Medicaid expenses.

Tobacco Control Programs Work

In a 2007 publication, *Ending the Tobacco Problem: A Blueprint for the Nation*, the prestigious Institute of Medicine of the National Academy of Science concluded,

> "The evidence … shows that comprehensive state programs have achieved substantial reductions in the rates of tobacco use … this is particularly true … when states aggressively funded and implemented their tobacco control programs."[27]

A 2006 study published in the *American Journal of Health Promotion* provides evidence of the effectiveness of comprehensive tobacco control programs and tobacco control policies. The study's findings suggest that well-funded tobacco control programs combined with strong tobacco control policies increase cessation rates. Quit rates in communities that experienced both policy and programmatic interventions were higher than quit rates in communities that had only experienced policy interventions (excise tax increases or secondhand smoke regulations).

These savings are not only over the long haul. Tobacco control can have immediate benefits. A 2012 George Washington University study found that when the Massachusetts Medicaid program covered a comprehensive smoking cessation benefit, the state saw a $3 in health care savings for $1 invested in only a year-and-a-half.[28]

This finding supports the claim that state-based tobacco control programs can accelerate adult cessation rates in the population and have an effect beyond that predicted by tobacco-control policies alone.[29]

A report by the Tobacco Control Program's independent evaluator concludes:

> "..sizeable budget reductions [since 2009] limit the Program's ability to reach a significant proportion of New Yorkers with the wide range of evidence-based interventions that have been developed over many years. This limited budget also constrains the Program's ability to address stubbornly high smoking rates among historically disadvantaged populations." [30]

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[27] Institute of Medicine of the National Academies, "Ending the Tobacco Problem: A Blueprint for the Nation," Washington, D.C., The National Academies Press, p. 171.

[28] Richard, P., West, K., and Ku, L., "The Return on Investment of a Medicaid Tobacco Cessation Program in Massachusetts," PLoS One, January 6, 2012, 7(1).

[29] Hyland, A, et al., "State and Community Tobacco-Control Programs and Smoking - Cessation Rates Among Adult Smokers: What Can We Learn From the COMMIT Intervention Cohort?" *American Journal of Health Promotion* 20(4):272, April/March 2006.

[30] RTI International, "2011 Independent Evaluation Report of the New York Tobacco Control Program," Prepared for the New York State Department of Health, November 2011, p. ES-1.

It recommends:

> "Increas(ing) NY TCP funding to a minimum of one-third of CDC's recommended funding level for New York ($254 million) to $85 million per year for FY 2012–2013 and to $127 million (50% of CDC's recommendation) for FY 2013–2014 and following years."[31]

Recommendation: New York should spend a dime of every dollar of revenue from tobacco sales on tobacco control. New York must fulfill its promises to use tobacco revenues for programs to help smokers to quit and to keep children from smoking. We recommend **incrementally increasing Tobacco Program funding to the CDC-recommended level of $254 million per year.** The program's annual budget should be increased to $85 million in 2013 – 14 and then, as its capacity grows, increased every year until it reaches the target appropriation. **Lawmakers must reject the governor's plan that could lead to reductions in funding. This program's budget should be bolstered, not cut.**

Recommendation: Target more resources to adult cessation. Achieving near-term reductions in tobacco use rates, and the incidence of tobacco-caused disease, will best be accomplished by encouraging adult smokers to quit and providing resources to help them succeed. Only by motivating smokers to attempt to quit smoking and providing the pressure, resources, and support to make those attempts successful will near-term smoking rates decline, disease rates decline, premature deaths decline, and economic savings accrue. Most smokers want to quit, and encouraging and assisting adult cessation is a cost effective tobacco control strategy.

Recommendation: Increase community level interventions, especially in disadvantaged urban neighborhoods and rural areas. To change social norms a program must be well integrated into a community. Program personnel must understand and, preferably, live in, the communities where they work. At least one-third of any budget increase should be directed to increasing the level of community activity.

Recommendation: Increase funding for anti-smoking media messages. As quickly as possible, the TCP should increase its media budget to $40 million/year and target messages to those, such as the poor and non-English speakers, that the program has not been reaching.

Recommendation: Develop and implement strategies for reaching those with mental illness or addictive disorders: People with mental illness smoke at a rate almost twice that of the general public. Increasingly, tobacco use is concentrated in this population, and if the problem is not addressed now, the burden of tobacco use will increasingly fall on those least able to absorb it.

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[31] *Id,* p. ES-3.