**STATE TOBACCO TAX INCREASES: EXPLANATIONS AND SOURCES FOR
PROJECTIONS OF NEW REVENUES & BENEFITS**

The economic model developed jointly by the Campaign for Tobacco-Free Kids (TFK), the American Cancer Society Cancer Action Network (ACS CAN), and Economics for Health[1] (housed at the Johns Hopkins Bloomberg School of Public Health) projects the increase in state revenues, public health benefits, and health care cost savings resulting from increases in state cigarette tax rates. The projections are updated annually. Calculations are based on economic modeling by Frank Chaloupka, Ph.D., and John Tauras, Ph.D., at the Institute for Health Research and Policy at the University of Illinois at Chicago, Jidong Huang, Ph.D., at Georgia State University, and Michael Pesko, Ph.D., at the University of Missouri.[2]

The projections indicate that cigarette tax increases boost state tax revenues and reduce smoking. That is because a significant cigarette tax increase more than offsets any revenue lost from the decline in pack sales caused by the price increase. Projections are based, in part, on research findings that nationally, a 10 percent cigarette price increase, if maintained against inflation, reduces youth smoking rates by 6.5 percent or more, young adult (18-24 years old) smoking rates by about 3.25 percent, adult smoking rates by 2 percent, and total consumption by 4 percent.[3][4][5][6] The model incorporates research showing that changes in consumption and prevalence are dependent on the starting pack price, so states that have a higher starting pack price will actually see a larger percentage decline in smoking rates compared to states with lower starting pack prices.

The projections are fiscally conservative, including generous adjustments for lost state pack sales and the corresponding loss of state revenue caused by tax avoidance and tax evasion. For the purposes of our modeling, tax avoidance refers to legal efforts by individuals who smoke to avoid paying taxes. This includes obtaining lower-taxed or untaxed cigarettes either across state lines, from internet retailers, from tribal vendors not subject to state taxes, or from other sources. Tax evasion refers to illegal methods of circumventing tobacco taxes, including organized criminal smuggling activity.[7] Despite such practices, cigarette tax increases still generate new revenue and reduce smoking rates, which in turn, reduce smoking-caused disease, deaths, and related economic costs. These projections consider factors such as interstate excise tax differences and

[1] Economics for Health, https://www.economicsforhealth.org/.

[2] Listed researchers work with Economics for Health, https://www.economicsforhealth.org/about-us/who-we-are/.

[3] Chaloupka, FJ, "Macro-Social Influences: The Effects of Prices and Tobacco Control Policies on the Demand for Tobacco Products," *Nicotine & Tobacco Research*, 1999, and other price studies at https://www.economicsforhealth.org/.

[4] Tauras, J, et al., "Effects of Price and Access Laws on Teenage Smoking Initiation: A National Longitudinal Analysis," NBER, June 2001, https://www.nber.org/papers/w8331.

[5] Chaloupka, FJ & Pacula, R, "The Impact of Price on Youth Tobacco Use," Chapter 12 in National Cancer Institute, Smoking and Tobacco Control Monograph 14, *Changing Adolescent Smoking Prevalence*, November 2001; International Agency for Research on Cancer (IARC), *Effectiveness of Tax and Price Policies for Tobacco Control*, IARC Handbooks of Cancer Prevention in Tobacco Control, Volume 14, 2011.

[6] Community Preventive Services Task Force, "Tobacco Use: Interventions to Increase the Unit Price for Tobacco Products," November 2012, https://www.thecommunityguide.org/findings/tobacco-use-interventions-increase-unit-price-tobacco.html.

[7] National Research Council (NRC) & Institute of Medicine (IOM), *Understanding the U.S. Illicit Tobacco Market: Characteristics, Policy Context, and Lessons from International Experiences*, Committee on the Illicit Tobacco Market: Collection and Analysis of the International Experience, P. Reuter and M. Majmundar, Eds. Committee on Law and Justice, Division of Behavioral and Social Sciences and Education. Board on Population Health and Public Health Practice, Institute of Medicine. Washington, DC: The National Academies Press, 2015, https://nap.nationalacademies.org/catalog/19016/understanding-the-us-illicit-tobacco-market-characteristics-policy-context-and.

population distribution, compacts or agreements with tribal groups, and high-tech tax stamps in our calculations.

Economic studies indicate that cigarettes and other tobacco products (OTPs), such as roll-your-own tobacco, cigars, and e-cigarettes, can be substitutes for one another to some degree, meaning if cigarette taxes (or prices) are increased while OTP taxes (or prices) remain unchanged, some of the reductions in cigarette smoking could be offset by increases in the use of OTPs.[8] In the majority of states where OTPs are taxed at a lower rate than cigarettes, equalizing the tax rates on the range of OTPs to that of cigarettes would reduce this potential substitution. Tax equalization would also reduce the use of OTPs, while at the same time generating additional revenue. Parallel OTP tax rates are calculated as a state's cigarette tax rate as a percentage of the national wholesale price, which is based on adjusting the base wholesale price from the USDA Economic Research Service with tobacco companies' list price increases throughout the past year,[9] or a percentage of the state retail price. A national average wholesale price is used because state-specific wholesale price data are not available.

These projections incorporate the impact of annual background declines of 5 percent for adult and future youth smoking prevalence and 5 percent for pack sales, as well as changes in pack prices. The background decline is the annual reduction in cigarette use that would be expected to occur without any changes in the tax rate due to other tobacco control policies, changing social norms, and a changing tobacco product landscape. Smoking and pack sale declines in any particular state will vary depending on its existing smoking rates; pack prices; other tobacco prevention, cessation, and industry activities; and changes in population. Projections are not adjusted for projected changes in state population or population demographics. However, projections are conservative in controlling for other factors and to be even more careful, the projected amounts have also been rounded down.

Despite all of these generous adjustments to avoid over-estimates, the projections still show that large state cigarette tax increases will both significantly reduce smoking levels and substantially increase state revenues. The increased tax per pack will still bring in more new state revenue than is lost from the decrease in the number of packs sold caused by consumption declines, tax avoidance, and smuggling resulting from the tax increase. Tax avoidance or evasion through tribal sales – purchasing tobacco products on tribal lands – is also included in the calculation, based on analysis of data from the 2010/2011 Tobacco Use Supplement to the Current Population Survey by researchers with Economics for Health. In those states that apply their sales tax percentage to the total retail price of a pack of cigarettes (including the state cigarette tax amount), a cigarette tax increase will raise state sales tax revenues per pack, which will offset sales tax revenue losses from fewer packs being sold. In addition, people who smoke who quit or cut back will likely spend the money they previously spent on cigarettes largely on other goods on which state taxes may be collected, which could further increase state revenues.[10]

These projections assume that the tax increase is fully passed on to the consumer in higher prices, and keeps up with inflation over time, which is consistent with economic research on the usual impact of cigarette taxes on cigarette prices.[11] [12] [13] However, because of industry or retailer pricing strategies or changes in consumer purchasing behavior, some customers may not experience a price increase of the full amount of the tax

[8] Chaloupka, FJ & Warner, KE, "The Economics of Smoking," in Culyer, AJ & Newhouse, JP, eds., *Handbook of Health Economics*, Amsterdam: North-Holland, 2000.

[9] Media reports or industry analyst reports.

[10] Campaign for Tobacco-Free Kids, Counter Tobacco, & American Heart Association, *Deadly Alliance Update: How Tobacco Companies and Convenience Stores Partner to Market Tobacco Products and Fight Life-Saving Policies*, December 15, 2016, https://www.tobaccofreekids.org/what-we-do/industry-watch/deadly-alliance.

[11] U.S. Department of Health and Human Services (HHS), *Reducing Tobacco Use: A Report of the Surgeon General,* Atlanta: HHS, CDC, National Center for Chronic Disease Prevention & Health Promotion, Office on Smoking and Health, 2000.

[12] Chaloupka, FJ, et al., 2000.

[13] HHS, *Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General,* Atlanta: HHS, CDC, National Center for Chronic Disease Prevention & Health Promotion, Office on Smoking and Health, 2012.

increase.[14] This can happen particularly if the amount of the increase is small enough to be minimized or completely cancelled out by industry price promotions, resulting in few, if any, public health benefits. If a tax increase is not fully passed on in the form of higher prices, then the reductions in smoking and its consequences in response to the tax increase will be smaller, while the revenues generated from the tax increase will be larger. Alternatively, if cigarette companies use the tax increase as an opportunity to raise net-of-tax prices and the tax increase is more than passed on, then the reductions in smoking and its consequences will be larger, while the increase in revenues will be smaller.

The starting price per pack (before the proposed cigarette tax increase) used in these projections includes all federal and state excise and sales taxes and, where applicable, local taxes (e.g., New York City's $1.50 per pack tax is factored into the overall New York State price per pack). The prices are based on data from *The Tax Burden on Tobacco*;[15] reports of state and local cigarette tax increases; media reports on tobacco company price changes; the USDA Economic Research Service; the U.S. Bureau of Economic Analysis (for inflation adjustments); the U.S. Federal Trade Commission's *Cigarette Report for 2022*[16] to adjust prices for retailer-based discounts, promotions, and coupons; and local tobacco pricing laws (i.e., New York City and Providence's prohibition on coupon redemption and product discounts). Pack prices also incorporate a 20 percent mark-up that research shows the industry often adds whenever prices increase through a tax increase or otherwise.

The projections assume that the state will follow standard practice and apply the cigarette tax increase to all previously tax-stamped or otherwise tax-paid cigarettes held in inventory by wholesalers or retailers on the effective date of the increase. Failing to tax such cigarettes held in inventory would open the door to massive pre-increase stockpiling by retailers and wholesalers to evade the increase, delaying and reducing the amount of new state revenues.

For some states, projections for new revenues generated from an OTP tax increase are included, based on the most recent revenue data available, the products that are currently covered, and declines in use due to the price increase. As with cigarette tax revenue projections, these revenue projections assume the tax increases are fully passed onto consumers and that the state will apply an inventory tax to OTPs in stock when the tax increase goes into effect. These projections are also rounded to be more fiscally conservative. Revenue projections for e-cigarette taxes are not available at this time.

The projected declines in adult, young adult, youth smoking, smoking-harmed births, and related deaths are calculated by applying the above findings regarding the effects of tax and price increases to the number of current adults who smoke in each state and to estimates of the number of youth (under 18 years old) alive today in each state who will become adults who smoke and the number projected to die from smoking.[17] [18] [19] [20]

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[14] Harding, M, Leibtag, E, & Lovenheim, M, *The Heterogeneous Geographic and Socioeconomic Incidence of Cigarette Taxes: Evidence from Nielsen Homescan Data*, May 2010, http://www.bus.umich.edu/ConferenceFiles/MTAXI/Lovenheim_Rev.pdf.

[15] Orzechowski and Walker, *The Tax Burden on Tobacco, 2024*, 59, Arlington, VA: Orzechowski and Walker, 2025.

[16] U.S. Federal Trade Commission (FTC), *Cigarette Report for 2022*, October 2023, https://www.ftc.gov/system/files/ftc_gov/pdf/2022-Cigarette-Report.pdf [data for top 4 manufacturers only].

[17] CDC, "Cigarette Smoking During Pregnancy: United States, 2016," *NCHS Data Brief, 305*, February 2018, https://www.cdc.gov/nchs/data/databriefs/db305.pdf.

[18] CDC, "Annual Smoking-Attributable Mortality, Years of Potential Life Lost, and Economic Costs—United States 1995-1999," *MMWR* 51(14):300-03, April 11, 2002, www.cdc.gov/mmwr/preview/mmwrhtml/mm5114a2.htm.

[19] CDC, "Annual Smoking-Attributable Mortality, Years of Potential Life Lost, and Economic Costs—United States 2000-2004," *MMWR* 57(45):1226-1228, November 14, 2008, http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5745a3.htm.

[20] CDC, "Projected Smoking-Related Deaths Among Youth—United States," *MMWR* 45(44):971-974, November 11, 1996, http://www.cdc.gov/mmwr/preview/mmwrhtml/00044348.htm, for data on relative death risks of smokers, nonsmokers, and former smokers.

Adult prevalence rates overall and broken down by relevant demographics are from the U.S. Centers for Disease Control and Prevention's Behavioral Risk Surveillance System (BRFSS).[21]

The projected five-year savings from fewer smoking-caused heart attacks and strokes, fewer smoking-affected pregnancies and related birth complications, and fewer lung cancer cases show just some of the many substantial savings from the smoking reductions prompted by a tax increase that begin to accrue immediately. The projected five-year lung cancer cost savings as a result of adults who smoke quitting due to the tax increase takes into account the relative risk of developing lung cancer among quitters and the number of lung cancer deaths attributable to smoking.[22] [23] These savings will increase steadily in subsequent years. The projected five-year smoking-affected pregnancy and birth savings accrue from declines in smoking among pregnant persons and corresponding reductions in smoking-caused birth complications and related health care costs for their children in their first year of life.[24] The five-year heart attack and stroke savings projections show the estimated reductions in smoking-caused health care expenditures from reduced smoking-caused heart attacks within the first five years after the tax increase.[25] [26]

Because of research and data limitations, it is not yet possible to estimate total health care cost savings in each year following a cigarette tax increase, or even to provide reasonable estimates of the total health care savings over the first five or ten years. Since many smoking-related diseases take years to develop, smoking-caused health care cost savings from a cigarette tax increase will be relatively small in the first few years after an increase; however, they grow quickly. The projected long-term total health care cost savings from reducing the number of future youth and current adults who smoke accrue over the lifetimes of youth (under 18 years old) alive in the state today who quit or don't start because of the tax increase and over the lifetimes of current adults who smoke who quit because of the tax increase. For adults who smoke, their lifetime health care costs average about $20,800 (in 2026 dollars), despite shorter life spans. However, the savings per adult who quits smoking are less than that amount (about $11,000 in 2026 dollars) because adults who smoke have already been significantly harmed by their smoking and have already incurred or locked-in extra future smoking-caused health costs.[27] [28] [29] [30]

The five-year savings to the state Medicaid program are estimated based on the number of non-disabled, non-elderly adult Medicaid recipients expected to quit due to the tax increase and the costs averted per quitting Medicaid recipient.[31] Estimates for adults enrolled in state Medicaid programs are based on data from the

[21] CDC, Behavioral Risk Surveillance System (BRFSS) Prevalence & Trends Data, https://www.cdc.gov/brfss/brfssprevalence/index.html.

[22] Chang, S, et al., "Estimating the cost of cancer: results on the basis of claims data analyses for cancer patients diagnosed with seven types of cancer during 1999 to 2000," *Journal of Clinical Oncology* 22(17):3524-30, September 2004.

[23] Khuder, SA & Mutgi, AB, "Effect of smoking cessation on major histologic types of lung cancer," *Chest* 120(5):1577-83, November 2001.

[24] Miller, D, et al., "Birth and First-Year Costs for Mothers and Infants Attributable to Maternal Smoking," *Nicotine & Tobacco Research* 3:25-35, 2001; and state pregnancy-smoking and birth data.

[25] Lightwood, JM & Glantz, SA, "Short-Term Economic and Health Benefits of Smoking Cessation – Myocardial Infarction and Stroke," *Circulation* 96(4), August 19, 1997.

[26] Kabir, Z, et al., "Coronary Heart Disease Deaths and Decreased Smoking Prevalence in Massachusetts, 1993-2003," *American Journal of Public Health* 98(8):1468-69, August 2008.

[27] Hodgson, TA, "Cigarette Smoking and Lifetime Medical Expenditures," *The Milbank Quarterly* 70(1), 1992. CDC, "Projected Smoking-Related Deaths Among Youth—United States," *MMWR* 45(44):971-974, November 8, 1996, http://www.cdc.gov/mmwr/preview/mmwrhtml/00044348.htm. Health care costs are adjusted to 2024 dollars using the Price Indexes for Gross Domestic Product from the U.S. Bureau of Economic Analysis (last revised November 29, 2023).

[28] Nusselder, W, et al., "Smoking and the Compression of Morbidity," *Epidemiology & Community Health*, 2000.

[29] Warner, K, et al., "Medical Costs of Smoking in the United States: Estimates, Their Validity, and Their Implications," *Tobacco Control* 8(3):290-300, Autumn 1999.

[30] CDC, "Annual Smoking-Attributable Mortality, Years of Potential Life Lost, and Economic Costs—United States 2000-2004," *MMWR* 57(45):1226-1228, November 14, 2008, http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5745a3.htm.

[31] Miller, LS, et al., "State estimates of Medicaid expenditures attributable to cigarette smoking, fiscal year 1993," *Public Health Reports* 113(2):140-51, 1998.

Centers for Medicare and Medicaid Services (CMS) and include the enrollment in states that expanded their Medicaid eligibility as part of the Affordable Care Act as of January 1, 2026[32] and adults who were previously eligible under existing rules and are expected to be enrolled in the years 2026-2030.[33] [34] The enrollment estimates reflect the enrollment changes projected in Congressional Budget Office (CBO) baseline assumptions under current law.[35] This incorporates the implementation of the 2025 budget reconciliation law (H.R. 1, now Public Law 119-21), which is expected to substantially reduce enrollment, with losses concentrated among the Affordable Care Act Medicaid expansion group, starting in FY 2026.

The projected Medicaid cost savings are calculated using per capita adult Medicaid spending data[36] and take into account the costs of newly eligible adult Medicaid enrollees separately from the previously eligible adult Medicaid enrollees, as well as future projected cost increases.[37] Enrollment projections and cost analyses were provided by Elizabeth Zhang and Gideon Lukens at the Center on Budget and Policy Priorities. The proportion of the state Medicaid program's projected cost savings that would accrue to the state government are based on the state's Federal Medical Assistance Percentage (FMAP),[38] calculated separately for newly eligible and previously eligible enrollees. Only the projected cost savings that would accrue to the state government are reported.

All projected savings have been adjusted to 2026 dollars using the Price Indexes for Gross Domestic Product from the U.S. Bureau of Economic Analysis (last revised September 25, 2025),[39] with the exception of the Medicaid cost savings, which incorporate national health care cost growth from CMS, adjusted to 2026 dollars by removing general price inflation as projected under CBO's baseline (see footnote 37). These projections do not include a range of additional short and long-term savings from other declines in smoking-caused health problems and other smoking-caused costs.[40]

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[32] Kaiser Family Foundation, "Status of State Action on the Medicaid Expansion Decision," September 29, 2025. Available at https://www.kff.org/status-of-state-medicaid-expansion-decisions/.

[33] Enrollment data for FY2024 was accessed November 2025. Centers for Medicare and Medicaid Services (CMS), "Medicaid Enrollment Data Collected Through MBES," https://www.medicaid.gov/medicaid/program-information/medicaid-and-chip-enrollment-data/enrollment-mbes/index.html.

[34] Medicaid and CHIP Payment and Access Commission (MACPAC) "Exhibit 15. Medicaid Full-Year Equivalent Enrollment by State and Eligibility Group, FY 2022 (thousands)," *MACStats: Medicaid and CHIP Data Book*, 2024, https://www.macpac.gov/publication/medicaid-full-year-equivalent-enrollment-by-state-and-eligibility-group-2/.

[35] Enrollment is estimated using the Congressional Budget Office's (CBO's) June 2024 detailed baseline Medicaid projections, https://www.cbo.gov/data/baseline-projections-selected-programs#9, adjusted for CBO's January 2025 baseline updates, https://www.cbo.gov/publication/60870, and anticipated impacts of the 2025 budget reconciliation law (H.R. 1) based on CBO's projections of uninsurance, https://www.cbo.gov/publication/61367, and Medicaid coverage loss, https://www.cbo.gov/system/files/2025-10/PL-119-21-Medicaid%20_0.pdf. Estimates do not account for state variation in policy responses and implementation, which may substantially affect enrollment.

[36] Costs are based on estimates of Medicaid spending per full-year equivalent enrollee for FY 2022 from MACPAC "EXHIBIT 22. Medicaid Benefit Spending Per Full-Year Equivalent Enrollee by State and Eligibility Group, FY 2022," https://www.macpac.gov/publication/medicaid-benefit-spending-per-full-year-equivalent-fye-enrollee-by-state-and-eligibility-group/, along with CMS MBES expenditure reports for expansion adults in FY 2024, https://www.medicaid.gov/medicaid/financial-management/state-expenditure-reporting-for-medicaid-chip/expenditure-reports-mbescbes/index.html.

[37] Costs are projected using CBO's June 2024 detailed baseline Medicaid projections, https://www.cbo.gov/data/baseline-projections-selected-programs#9, adjusted for CBO's January 2025 baseline updates, https://www.cbo.gov/publication/60870, and anticipated impacts of H.R. 1 on benefit spending, https://www.cbo.gov/publication/61570. Costs are adjusted to 2026 dollars using CBO's September 2025 baseline economic projections, https://www.cbo.gov/about/products/major-recurring-reports#1. Estimates do not account for state variation in policy responses and implementation, which may substantially affect costs.

[38] 88 Fed Reg 81090, https://www.govinfo.gov/content/pkg/FR-2023-11-21/pdf/2023-25636.pdf.

[39] U.S. Bureau of Economic Analysis, National Data, National Income and Product Accounts, Table 1.1.4. Price Indexes for Gross Domestic Product, last revised September 25, 2025, accessed December 1, 2025 from https://www.bea.gov/itable/.

[40] See, e.g., U.S. Department of the Treasury, *The Economic Costs of Smoking in the U.S. and the Benefits of Comprehensive Tobacco Legislation*, 1998.

Projections for cigarette tax increases much higher than $1.00 per pack are limited, especially for states with relatively low current tax rates, because of the lack of research on the effects of larger cigarette tax increase amounts on consumption and prevalence. Projections for cigarette tax increases much lower than $1.00 per pack are also limited because small tax increases are unlikely to produce significant public health benefits.

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Projections change when new data or research findings become available and the underlying data and methodologies are updated or revised.

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Economics for Health: Jeffrey Drope, jdrope@jhu.edu

Campaign for Tobacco-Free Kids' resources on state tobacco tax increases:
https://www.tobaccofreekids.org/what-we-do/us/state-tobacco-taxes
https://www.tobaccofreekids.org/what-we-do/us/state-tobacco-taxes/fact-sheets

American Cancer Society Cancer Action Network's resources on tobacco taxes:
http://fightcancer.org/tobacco/taxes

Economics for Health's resources on tobacco taxes:
https://www.economicsforhealth.org/topics/tax-and-price/