

CRS Report for Congress

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The Proposed Tobacco Settlement: Who Pays for the Health Costs of Smoking?

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Summary

One of the issues raised in the consideration of the proposed tobacco settlement is the compensation of various parties that might pursue lawsuits to recover the health costs of smoking. These parties include states, tentatively allocated \$5 billion per year in the agreement reached in June 1997, and individuals. Popular estimates of the annual medical costs of smoking range around \$50 billion, with the states accounting for slightly under \$4 billion, individuals about \$10 billion and the remainder paid for by the federal government and private entities. Some recent estimates have reported higher costs. A more complete accounting of the health costs of smoking not only increases the size of the costs, but also reallocates costs — and implies net financial benefits for some parties. Governments save on the costs of old-age medical care, social security, and nursing home care due to the earlier death of smokers. (This result does not mean that it is desirable that people die early; it means that in determining financial cost, if that is the justification for a payment, a correct measure of the loss will only be calculated if these effects are included.) Smoking has apparently brought financial gain to both the federal and state governments, especially when tobacco taxes are taken into account. In general, smokers do not appear to currently impose net financial costs on the rest of society. The tobacco settlement will increase the transfer of resources from the smoking to the nonsmoking public. (This report will be updated periodically.)

Introduction

Part of the objective of the proposed tobacco settlement is to compensate various parties who might pursue lawsuits. Indeed, the settling of potential lawsuits is a major reason for the agreement by the tobacco companies to the plan. An important public policy concern is whether the financial claims are justified and, in addition, whether certain programs run by the federal government might be justified in receiving a share of benefits. These economic issues are treated in this paper. (See CRS Issue Brief 98022 for other issues that drive the formulation of public policy on tobacco, including public health concerns, particularly underage smoking, that are not discussed in this report.)

A proposed settlement was negotiated in June, 1997 between state attorneys general, plaintiff's lawyers, public health advocates, and cigarette manufacturers' representatives. The initial plan for dividing \$15 billion in fully phased in annual payments was: a \$5 billion fund to settle individual lawsuits; \$5 billion to reimburse states for Medicaid costs; and \$5 billion for funding certain spending programs.¹ Some of the tobacco legislation subsequently proposed, including the plan agreed to by the Senate Commerce Committee (S. 1415), does not specify exactly how the money was to be spent. (Other tobacco bills include S. 1343/H.R. 2764, S. 1491/H.R. 3027, S.1530 and S. 1638).

The first section of this paper reports the popularly cited estimates of the health costs of smoking. The next section discusses a more comprehensive measure of these costs. For each set of estimates, the report makes some rough allocations of the amount paid by the federal government, state governments, private third parties, and smokers themselves. The final section of the report discusses some uncertainties surrounding these estimates.

The Rice Estimates

The most popularly cited number for the annual cost of smoking is the \$50 billion estimate made by Dorothy Rice and her colleagues. That number is used in publications of the Center for Disease Control (CDC).² This amount measures the estimated additional medical cost attributable to smoking related diseases in 1993 dollars, based on estimates of smoking attributable risk (what share of each disease is due to smoking). The editors add that this \$50 billion amount translates into approximately \$2.06 per pack. The study also indicates the shares paid by various groups: 21% by smokers, 33.4% by private insurance, 20.4% by medicare, 10.2% by medicaid, 9.5% by other federal programs, 3.2% by other state programs, and 2.2% by other. Total medicaid costs are thus about \$5 billion. Recently, a new study by some of the same researchers resulted in a considerably larger estimate of the Medicaid cost—\$12.9 billion—for the same year (and using the same data set).³

¹ Reported in "Smokers Would Pay Bills for Previous Generations," *Washington Post*, June 21, 1997.

² Medical-Care Expenditures Attributable to Cigarette Smoking— United States, 1993. *Morbidity and Mortality Weekly Report*, vol. 43, No. 26, July 8, 1994. The estimates were made by: J.C. Bartlett, School of Public Health and L.S. Miller, School of Social Welfare, University of California—Berkeley; D.P Rice, Institute for Health and Aging, University of California—San Francisco.

³ Leonard S. Miller, Xiulan Zhang, Thomas Novotny, Dorothy P. Rice, and Wendy Max, State Estimates of Medicaid Expenditures Attributable to Cigarette Smoking, Fiscal Year 1993, *Public Health Reports*, Volume 113, pp. 140-151. The higher estimate apparently resulted from direct estimation of medical costs as a function of smoking, a procedure that expands the scope of smoking-related illness (as compared to assessing the share of certain diseases that are attributable to smoking) but is more vulnerable to bias from omitted variables (e.g., smoking and alcohol consumption are correlated, so that some of the medical costs attributed to smoking may arise from alcohol used because measures of alcohol consumption were not available). Note also that the results were not statistically significant at normal significance levels. No tests of significance were reported with the earlier estimates.

States pay a bit over 40% of medicaid; if “other” is allocated to the same third-party category as private insurance, we can estimate the following approximate amounts of the \$50 billion: \$18.1 billion for the federal government, \$3.6 billion for the states, \$17.8 billion for private insurance and other, and \$10.5 billion for individual smokers. The later research by Rice, et al. implies costs of over \$5 billion for the states.

These calculations are, however, an incomplete accounting of the costs of smoking. The economic cost of smoking is composed of two parts: the actual costs of producing the product and the additional costs, largely health related. These additional costs include not only any excess health costs, but also other costs such as lost productivity and, most importantly, premature death. Indeed, the same CDC report includes an estimate of indirect costs associated with morbidity and premature mortality of \$6.9 billion and \$40.3 billion, also in 1993 dollars, which would approximately double the total cost. The following section discusses an estimate of this more comprehensive measure of smoking-related health costs.

The Manning Study

A more complete accounting of the costs of smoking not only increases the size of the costs, but also reallocates costs — and implies net financial benefits for some parties. For example, total medical expenditures due to smoking are reduced by offsetting reductions in costs because of premature death. A person who dies from a smoking related disease causes an increase in medical cost at that time, but medical costs are decreased in the future because that person does not suffer the illnesses otherwise suffered during a longer life. Similarly, smokers who die prematurely lose retirement benefits in the form of social security, which is a financial saving for the government (since the smokers are generally alive during the contribution period).

It is important to clarify this point, which has been confused in some press reports. The fact of savings from government transfers due to premature death does not imply that there is a social gain from premature death; there is clearly a loss that accrues to the smoker who is part of society. Nevertheless, in a straight-forward accounting for costs, the government in its role as provider of certain services will experience financial savings from premature death, which must be considered in determining how different parties fare because of smoking. This observation does not mean that it is desirable that people die early; rather it means that in compensating relevant parties financially, if that is the justification for a payment, a correct measure of the loss will only be calculated if the effects of premature death are taken into account. In addition to these health-related financial costs and savings, there is a transfer from smokers to governments because of the cigarette taxes.

This report uses estimates by Manning,⁴ updated and categorized for 1993 by Viscusi,⁵ to calculate the effects on third parties (federal, state, and private third-parties

⁴ Willard G. Manning, Emmett B. Keeler, Joseph P. Newhouse, Elizabeth M. Sloss, Jeffrey Wasserman. *The Costs of Poor Health Habits, A RAND Study*, Cambridge, MA: Harvard University Press, 1991.

⁵ Kip Viscusi. “Cigarette Taxation and the Social Consequences of Smoking.” *Tax Policy* (continued...)

such as insurance companies).⁶ The original study included the categories of medical costs, sick days, group life insurance, nursing homes, retirement benefits, effects of fires, and loss of taxes and contributions to these plans. Viscusi further divides the medical costs into those incurred under-65 and over-65. By allocating these categories to the different parties, a rough estimate of the general magnitude of these costs is provided.⁷ In the calculations, the federal and state payments and contributions made through the governments' role as employers are treated as private. Please note that these estimates are rough, and could probably be refined considerably.

Manning, et al. discounted payments, with those occurring later in life being valued less; the purpose of that study was to determine what tax would reflect external costs for a new smoker. These numbers would not provide a measure of the current cost, although Viscusi reports an allocation at a 0% discount rate, which would probably be close to how one would measure these current costs. Using a zero discount rate, each of the external parties actually benefits from smoking.

In this analysis, the federal government saves about \$29 billion per year in net health and retirement costs (accounting for effects on tax payments). These include a saving in retirement (largely social security benefits) of about \$40 billion and in nursing home costs (largely medicaid) of about \$8 billion. Costs include about \$7 billion for medical care under 65 and about \$2 billion for medical care over 65; the remaining \$10 billion cost is the loss in contributions to social security and general revenues that fund medicaid. (Note that medical costs already include offsetting savings for premature death and thus are much smaller in the aggregate than in the Rice estimates). The federal government also collects \$5.6 billion in cigarette taxes. This calculation implies that smokers (past and present) currently save the federal government almost \$35 billion per year.

State governments also have an overall saving, though smaller, of \$2.1 billion. This saving takes into account the large saving in nursing home costs financed through medicaid (\$4.8 billion) which exceeds net medical costs of \$1.5 billion. The remaining difference reflects a cost of \$1.8 billion from foregone contributions and a benefit of \$0.6 billion in retirement savings. States also receive about \$7.6 billion of cigarette taxes, for a total annual saving, including cigarette taxes, of almost \$10 billion.

⁵(...continued)

and the Economy, Vol. 9, National Bureau of Economic Research, Cambridge, MA: MIT Press, 1995, pp. 51-101.

⁶ The Manning study was also used in a CRS study of the proposed cigarette tax increase in 1994. This paper discusses the literature in this area more extensively and also discusses the potential magnitude of costs of second-hand smoking. See Jane G. Gravelle and Dennis Zimmerman, *Cigarette Taxes to Fund Health Care Reform*, CRS Report 94-214, March 8, 1994.

⁷ External medical costs (those not paid for by smokers) over 65 are primarily a federal responsibility because of medicare; the federal government is estimated to account for 83%, the state 2%, and private insurance 15%. Under-65 medical care is more heavily financed by private insurance: 51%, with 20% allocated to the state and 29% to the federal government. Nursing home care is 61% federal, 35% state, and 4% private; pensions are 64% federal, 35% private, and 1% state; contributions to these private and public plans are 56% federal, 10% state, and 34% private. These ratios were developed by CRS from a variety of sources on health expenditures, sources of pension income, and taxes.

Private third parties also have savings of \$5.4 billion largely because a \$22 billion saving in pensions offsets the net costs smokers impose on employer health plans.⁸

An alternative way of examining costs is to measure them from a lifetime perspective. This is the approach taken in the Manning study, which calculated the payment per pack that would be necessary to cover the net costs to society over an individual smoker's lifetime. That calculation is more likely to result in a cost because the savings from premature death would be discounted more heavily as they occur further in the future. If one were to impose a tax to cover these costs on a lifetime basis (we use a 5% discount rate) the tax, multiplied by current sales, would be a refund of \$0.5 billion for the federal government (a subsidy), receipts of \$1.1 billion for the states and receipts of \$5.4 billion for private sources. These estimated tax receipts are smaller than current cigarette taxes of \$5.6 billion for the federal government and \$7.6 billion for the state government, suggesting that current taxes are larger than the costs imposed on society. Both costs and benefits would be increased by about 10% to adjust for 1997 price levels.

Costs are imposed on some segments of society, with or without discount rates (and benefits are received by others). Private health insurance is one example where a net cost occurs. One should not necessarily conclude that lump sum payments to these firms is appropriate, however, since the higher costs were passed on to subscribers, that is, to the large group of individuals enrolled in private health insurance. Indeed, one could think of these third party private costs as falling on a broad segment of society, so that it makes some sense to aggregate these external costs. Once all costs, private, federal, state and local are combined, whether one discounts or not, the analysis indicates that smokers are transferring financial benefits to nonsmokers.

The proposed settlement would increase that transfer, because most or perhaps all of the cost of the settlement payment would fall on smokers,⁹ but the benefits would go partly to nonsmokers. Within the group of smokers, there would be a generational transfer: current and future smokers would pay to compensate existing and perhaps largely former smokers and their families. Since cigarette taxes are highly regressive, this plan would have the effect of redistributing income from lower income individuals to higher income ones, unless receipts are spent in a way to offset these effects.

Caveats and Uncertainties

The Manning study is the only comprehensive study of smoking costs, although there have been a number of more limited studies focusing largely on medical costs. Some are similar to the Rice study, and others focus on the lifetime medical costs taking into account

⁸ All of the above estimates are CRS allocations based on Viscusi's estimates of per-pack costs, aggregated by multiplying by number of packs.

⁹ See *The Proposed Tobacco Settlement: Effects on Prices, Smoking Behavior, and Income Distribution*, by Jane G. Gravelle, CRS Report 97-995, Updated February 24, 1998, for a discussion.

premature death. These studies and the Manning study were also examined in a previous CRS study; the highlights of this analysis are summarized below.¹⁰

The Manning study attributes variations in total lifetime health costs to smoking status, income, sex, and other attributes using data from an interview survey. This procedure is a standard one which attempts to control for the influences of nonsmoking factors on health. Updated to 1995 price levels and discounted at 5%, the result is that the combined burden imposed by smokers on non-smokers (accounting for premature death) is 33 cents a pack, well below current cigarette taxes, which are about 50 cents a pack. The authors report an upper bound health cost estimate by simply comparing smokers to nonsmokers and obtain a cost of 53 cents a pack; this measure is undoubtedly too high because smoking is known to be correlated with many other health risk factors. The authors also provide several estimates that restrict smoking attributable health costs to those diseases which are generally recognized to be associated with smoking, a procedure that may help to correct for omitted influences; these estimates lower the cost to non-smokers to close to zero or even result in savings (again at a 5% discount rate).

The Manning study is now somewhat dated and health effects of smoking may be affected by a variety of factors which cannot be easily captured in updates. There are also potential recall errors from survey data, and use of an alternative data source produced slightly larger costs when discounted (43 cents). There are other external effects beyond those that derive from the sharing of costs and benefits through social insurance. (The 1994 CRS study discusses many of these effects, although it suggests that one effect subject to much popular attention, the health cost of passive smoking, is likely to be very small.) Other studies have found different lifetime profiles of health costs. The results are quite sensitive to choice of discount rate, as should be apparent from the previous section. These uncertainties act in some cases to increase and in others to reduce the point estimates from the Manning study and the base case estimates used in that study represent a central position.

A recent study not covered in the 1994 CRS report found that, among the Dutch population, lifetime medical costs of smokers (undiscounted) were smaller than lifetime medical costs of nonsmokers, suggesting that aggregate medical costs alone (not counting pension savings) were lower as a result of smoking.¹¹ Such findings are consistent with a financial savings in medicaid expenditures from smoking, but these results do not necessarily apply to the United States.

¹⁰ Jane G. Gravelle and Dennis Zimmerman, *Cigarette Taxes to Fund Health Care Reform*, CRS Report 94-214, March 8, 1994. In part, this study discussed the external costs of passive smoking but found that this effect was uncertain and too small, when translated into dollar costs, to alter the findings regarding aggregate external costs discussed in the study. Passive smoking has been also been the subject of another CRS report: C. Stephen Redhead and Richard C. Rowberg, *Environmental Tobacco Smoke and Lung Cancer Risk*, CRS Report 95-1115 SPR, November 14, 1995. This study did not identify the potential dollar cost of passive smoking risk, but rather reviewed and assessed the size and relative certainty of the risk.

¹¹ Jan J. Barendregt, Luc Bonneux, and Paul J. Van Der Maas, *The New England Journal of Medicine*. The Health Care Costs of Smoking, *New England Journal of Medicine*, v. 337, No. 15, October 9, 1997, pp. 1052-1057.