

Although their numbers appear to be small, some employers also have a policy against hiring smokers. The Johns-Manville asbestos company stopped hiring smokers in 1978 (USDHHS, 1985 b), and some fire departments have recently decided to hire only nonsmokers (NJ GASP, 1985).

Summary: Workplace Smoking Policies

Approximately 30 percent of all private sector workplaces have a formal smoking policy, while a majority of Americans support smoking policies. Governments at all levels and the private sector are increasingly adopting or strengthening such policies and there is no evidence of retrenchment. In addition, the protection of nonsmokers, who account for 67 percent of the population, has become a primary motive for the development of policies. For these reasons, OTA believes that increasing adoption of increasingly stringent workplace smoking policies will likely continue for the foreseeable future,

COST-EFFECTIVENESS OF SMOKING POLICIES

Previous studies of the costs of smoking have focused on costs related to active smoking. Taking a society-wide perspective, OTA estimated that 314,000 deaths in 1982 were attributable to smoking-- 139,000 cancer deaths, 123,000 cardiovascular disease deaths, and 52,000 chronic obstructive lung disease deaths. The social costs attributable to those deaths include \$12 to \$35 billion in health care costs and \$27 to \$61 billion in lost earnings (OTA, 1985). There have also been analyses of the costs of active smoking from the perspective of the individual (Oster, et al, 1984) and the employer (Kristein, 1983; Weiss, 1981).

The costs and benefits of policies concerning smoking in the workplace, however, have not been extensively analyzed. An analysis depends, of course, on both the costs of implementing the policies and on their benefits. Any analysis should also clearly identify its

perspective--e.g. whether the effects arrayed are costs or benefits to society, to employers, to smokers, or to nonsmokers. In addition, while workplace smoking policies will certainly affect nonsmokers' exposures to passive smoking, these policies may also influence the extent of active smoking by smokers.

Proposed legislation (S. 1937, 99th Congress) would require Federal agencies to issue rules to designate smoking areas in U.S. Government buildings. These rules, to be developed in consultation with the Surgeon General and implemented after consultation with employee representatives, are to "make reasonable accommodations for the needs of the smokers and nonsmokers" who use Federal buildings, provide for display of signs designating smoking and no smoking areas, and provide for enforcement of smoking prohibitions in no smoking areas. Each of the components of this proposed legislation will affect the degree of nonsmokers' exposures to tobacco smoke and influence the nature of the relationships between smokers and nonsmokers in the workplace.

While policies concerning smoking in the workplace seem to be successful, information on the costs and effects of these policies is difficult to obtain. Because of this quantitative limitation, OTA has not attempted to conduct a cost-benefit or cost-effectiveness analysis of workplace smoking policies. Instead, this section discusses some of the factors that would need to be considered when evaluating the costs and effects of these policies.

Benefits of Workplace Smoking Policies

As mentioned earlier, one recent survey indicates that a large majority of the U.S. population believes smokers should refrain from smoking in the presence of nonsmokers and that companies should limit smoking to designated areas. While this expressed preference would be difficult to incorporate into an economic analysis of smoking policies, it is still an important consideration in any decision concerning the creation of such policies. Another important

consideration, difficult to incorporate in an economic analysis, is how the setting of workplace policies by the Federal Government will accelerate the current trends toward increased adoption of smoking policies by other levels of government and by private employers.

If workplace policies lead to reductions in exposure to passive smoking, then there should be a reduction in the incidence of smoking-related disease among nonsmokers. If treatment of these diseases requires the use of medical resources, less disease would imply savings in health care costs. Generally, reducing the incidence of nonfatal disease will lead to saving health care resources. Depending on the extent that these health care costs are paid for by insurance, saving health care resources should lead to a reduction in the costs of health insurance.

If the diseases caused by passive smoking are fatal, prevention will result in longer life. During the additional years of life gained, additional medical resources will be used. Thus, preventing an early death may lead to savings in health care costs in the present and increases in health care costs in future years. The net effect depends on the relative costs of the diseases in question and the discount rate used in the analysis of future effects. However, analysts disagree on whether these potential future costs should be included in a cost-effectiveness analysis (see OTA, 1985).

Life insurance rates will only be affected if the passive smoking-related diseases are fatal. Reducing the death rate of an insured group should lead to a reduction in the costs of providing life insurance. The extent of this reduction will depend on the size of the increase in longevity.

A few companies have restricted employment to nonsmokers in a desire to reduce the incidence of occupational disease and associated workers' compensation payments. For example, the combined effect of exposures to asbestos and cigarette smoking is much greater than the effect of exposure to only asbestos or cigarette smoke. Hiring only nonsmokers might reduce

the costs of compensating workers with asbestos-related disease, although reductions in asbestos exposures represent another alternative.

Eliminating smoking from the worksite would eliminate the workplace fires started by burning cigarettes. The effect of confining smoking to designated areas is less clear. Fire prevention and control might be better if smoking is restricted to particular locations, although actions might be needed to prevent smoking in non-designated areas. The reduction in the frequency of fires and associated property damage should lead to reduction in the costs of fire losses and insurance. Of course, the magnitude of this benefit will depend on the proportion of fires associated with smoking.

Reducing workplace smoking may also lead to reductions in the costs of cleaning and maintaining the workplace. This may include reductions in the costs of cleaning offices, a lessened need to clean and repair sensitive equipment, as well as a reduction in the costs of maintaining the ventilation system, e.g., in cleaning or replacing filters. Reduced workplace smoking may also improve relations with customers who are irritated by tobacco smoke.

The beneficiaries of any of the reductions in insurance costs depends on the method used for financing the insurance (in particular, the relative shares of the employer and the employee). Thus the analysis needs to be clear about who receives any particular benefit and who bears the costs of these policies.³

Several sources indicate that smokers have more sick loss days than nonsmokers, although this excess may not be entirely due to smoking (see OTA, 1985). If passive exposures also lead to an increase in sick time, then reducing passive exposures should lead to reductions in employee absenteeism among nonsmokers.

³It should also be noted that, in most cases, insurance payments represent transfers and, strictly speaking, may not be social costs.

Workplace smoking policies should also reduce or eliminate the irritation and annoyance experienced by nonsmokers when exposed to tobacco smoke. In many cases, tobacco smoke is part of the more general problem of indoor air pollution. Investigation of complaints about indoor air quality only rarely finds tobacco smoke to be the sole source of the problem (Robertson, 1986). But while indoor air pollution and the “sick building syndrome” are often the result of inadequate ventilation and exposures to other toxic agents, exposure to tobacco smoke is frequently a factor in complaints of ill health associated with office work (Melius, 1986).

Thus improving the comfort of nonsmokers and reducing tobacco smoke-induced irritation is an important benefit of these policies. Economists often suggest that the most appropriate way to place a monetary value on nonsmokers’ comfort would be to estimate how much nonsmokers might be willing to pay to avoid environmental tobacco smoke. Thus, on the benefit side would be how much nonsmokers would be willing to pay to reduce or eliminate exposure to tobacco **smoke**. On the cost side would be estimates of how much smokers might be willing to pay to continue to smoke without restrictions. But, reliable estimates of willingness to pay are difficult to obtain and would be influenced by the income levels of the individuals affected. In addition, ethical arguments are likely to be raised. Many consider clean air to be a right and, thus, reject the idea that nonsmokers should have to pay in order to breathe clean air. Others express concern that employers and the government have no right to restrict an individual’s decision to smoke.

The intended effect of smoking policies is to reduce or eliminate the exposures of nonsmokers to tobacco smoke. Another possible effect is that, faced with restrictions concerning when and where they may smoke, some smokers may reduce the amount of their smoking or give up the habit entirely. Surveys regularly report that a large majority of smokers would like to quit and that many have tried to quit. A survey at one company (Pacific Bell,

now called Pacific Telesis) indicated that if a new company policy concerning smoking in the workplace was implemented, 13 percent of the smokers would try to quit and 38 percent would smoke less (Eriksen, 1985). Thus, even though the primary purpose of these policies is to reduce or eliminate nonsmokers passive exposures, the implementation of workplace smoking restrictions may also motivate, encourage, or support the decisions of smokers to reduce their consumption or stop smoking entirely. Of course, if smokers quit in response to workplace smoking restrictions, their families will no longer be passively exposed, leading to additional health benefits among family members.

Costs of Workplace Smoking Policies

Each component of workplace smoking policies will also create implementation costs. For example, if a smoking policy includes the use of signs to indicate smoking and nonsmoking areas, the costs of the signs will need to be included in any evaluation. While it might be desirable to analyze separately the costs and effects of each component, it is likely to be difficult.

Even when considering a policy as a whole, it will be difficult to estimate the additional administrative costs that a smoking policy might create for employers. Once they are established and implemented, it is likely that smoking policies will simply be administered along with the other employer policies concerning personnel and buildings. It will thus be difficult to separate the costs of administering the smoking policy from the general costs of administration.

Restrictions on smoking may lead to changes in employee productivity. Some analysts have suggested that smokers are less productive than nonsmokers because of the time lost while smoking. Depending on where smoking is permitted and the design of the workplace, the extent of this possible time loss may change. If smokers need to travel far from their desks to smoke, the total time lost may increase. If they can continue to smoke at their desks, the time

lost through smoking will stay the same. If smokers reduce their on-the-job smoking, the amount of time lost may go down. Without the irritation of tobacco smoke, the morale of nonsmokers may improve and they may become more productive. If time has been lost because of conflicts between smokers and nonsmokers concerning where smoking is permitted, implementation of a smoking policy could reduce those conflicts and the consequent productivity loss.

Consideration of Alternatives

An important part of a cost-effectiveness analysis is the consideration of alternatives. Of course, one possible alternative is to do nothing. From a social perspective, no laws or regulations would be enacted. This would leave smokers and nonsmokers, employers and workers, to work out their own arrangements. Under certain very restrictive assumptions concerning the nature of markets and the decisions of employers, workers, and consumers, it has been suggested that a freely operating market system will generate the best possible combination of smoking and nonsmoking policies, prices, and wages (Tollison, 1986). If this is believed to be the case, then there would be no need for additional government action concerning private sector smoking policies.⁴ However, the conditions necessary for this conclusion are very restrictive and unlikely to exist.

Beyond the possibility of no action, several alternatives are available to handle the problem of passive smoking, one possibility is to establish smoking policies to designate smoking and nonsmoking areas in the workplace and to make accommodations for the needs of smokers and nonsmokers. Another alternative is physical modification of the workplace to separate smokers' work areas from those of nonsmokers.

⁴There still, however, may be a need for government action (legislation, regulation, labor-management negotiation) to set policies for its own workplaces.

Finally, the ventilation system could be redesigned to increase substantially the air flow in all areas to reduce the nonsmokers' exposures to tobacco smoke. For example, the current guidelines of the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) set a ventilation rate of 5 cubic feet per minute of fresh, outside air per person for general office where smoking is not permitted. For office areas where smoking is permitted, the standard is 20 cubic feet per minute per person. The cost of providing additional ventilation depends on the layout of the building and the amount of heating or cooling that this additional outside air requires. Additional ventilation will also provide an extra benefit by reducing the concentrations of other indoor pollutants that workers may be exposed to.

For each of these, a complete listing of the costs and effects would be desirable. However, even without conducting a comprehensive analysis, it appears likely that physical modification of the workplace or the use of additional ventilation would be substantially more expensive than establishing policies concerning smoking in the workplace.