Smoking Behavior and Policy

Discussion Paper Series

THE POLICY IMPLICATIONS OF INVOLUNTARY SMOKING AS A PUBLIC HEALTH RISK

Matthew L. Myers, Esq.
Susan L. Arnold

Asbill, Junkin, Myers & Buffone

Harvard University
John F. Kennedy School of Government
Institute for the Study of Smoking Behavior and Policy

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Requests or inquiries should be directed to:

Matthew Myers, Esquire
Asbill, Junkin, Myers & Burfone, Chartered
1607 New Hampshire Avenue, N.W.
Fourth Floor
Washington, D.C. 20009

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Matthew L. Myers, Esq.
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Institute for the Study of Smoking
Behavior and Policy
John F. Kennedy School of Government
Harvard University
79 John F. Kennedy Street
Cambridge, MA 02138
(617) 495-0806

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INTRODUCTION

On November 13, 1986 the National Research Council of the National Academy of Sciences issued the results of its year-long study entitled Environmental Tobacco Smoke: Measuring Exposure and Assessing Health Effects. On December 16, 1986 the Surgeon General of the Public Health Service issued his annual report on smoking and health. These reports are devoted to an examination and evaluation of the health effects of involuntary smoking. Both reports conclude that involuntary smoking can and does cause serious disease, including lung cancer, serious acute effects in otherwise healthy adults and severe respiratory problems in young children and infants.

Together, the Reports of the National Research Council and the Surgeon General may well have an impact on the attitudes and health of our nation as substantial and as important as the 1964 Surgeon General's Report. Like the landmark 1964 Report of the Advisory Committee to the Surgeon General of the Public Health Service, these two reports represent the development of a firm consensus on the part of the nation's leading scientists that involuntary smoking is a proven hazard affecting the health, safety and comfort of millions of Americans.

The finding that involuntary smoking poses a hazard to nonsmokers re-focuses the issue away from a debate over conflicting rights about whether smokers or nonsmokers are more inconvenienced and more irritated by the other's behavior. These reports mean that the issues posed by tobacco smoke exposure are likely to be examined in the context of questions of health and safety, including: When, if ever, should smokers be able to smoke in a location which jeopardizes the health of those who do not smoke? When, if ever, should the health of nonsmokers be balanced against the preference of smokers about when and where they smoke? What responsibility do employers, store owners and custodians of public buildings have to provide those who work or visit the buildings under their control with an environment which does not jeopardize their health? What is the impact of the fact that tobacco is voluntarily brought into that environment and that the

tobacco smoke could be eliminated without the use or introduction of expensive or new technology?

The findings raise policy questions distinct from those posed by the 1964 Report. First, while the tobacco industry contends that a smoker can freely choose whether to smoke, a fact disputed by evidence of the addictive nature of cigarettes, involuntary smoking does not involve free choice for nonsmokers. Infants and young children have little control over their environment and are the least able to avoid involuntary smoking. Adults, too, on a daily basis find themselves in locations where they are unable to avoid breathing tobacco smoke in the air. Millions of adults work in smoke-filled environments and have little control over the air they breathe. Many public buildings have no restrictions on smoking and many public places, such as stores and restaurants, expose adults and children to involuntary smoking. Thus, the risk to nonsmokers from involuntary smoking is brought about by the actions of individuals other than themselves, and the resulted injury is not self-inflicted. The issue is not a matter of common courtesy or of choice, but rather a matter of protection against a documented health hazard.

Second, while the estimated number of people who die each year from involuntary smoking is less than the number who die from their own smoking, the number of people exposed to involuntary smoking is far greater. While an estimated fifty-five million Americans smoke, every person in the United States is exposed to tobacco smoke in the air, the only difference being how frequently and in what concentrations. This fact is significant in light of the lack of evidence that there is a threshhold below which exposure to tobacco smoke is not hazardous.

Third, different individuals are exposed to different levels of risk from tobacco smoke in the air due to a wide variety of factors. For children, whose stage of physical development makes them especially sensitive to involuntary smoking, the level of risk depends largely on whether their parents and/or other caretakers smoke. For adults, the

level of risk depends on whether their spouse smokes, where they work, whether their co-workers smoke, whether the ventilation in their work setting is adequate, whether they work in an environment where they are exposed to other substances which interact with tobacco and whether they live in a community which has acted to protect nonsmokers. For persons young or old with pre-existing respiratory or pulmonary problems, exposure to tobacco smoke may pose a more immediate health risk.

The distinctions between smoking and involuntary smoking affect the consideration of what steps should be taken to protect the public and who should bear the responsibility for the injuries which can result. Efforts to address the problems caused by the direct health hazards of cigarette smoking have been focused largely on educating and assisting smokers and potential smokers not to start and/or to quit in order to protect their own health. Despite the recent spate of product liability suits by smokers and their families, the Courts have played no significant role with regard to the injuries suffered by smokers. With the exception of those state laws which restrict the sale of cigarettes to minors and Federal efforts designed to increase public awareness of the health hazards of smoking, the legislative branches of government have done little to protect smokers against the risks of their own smoking.

In contrast, the response to involuntary smoking is likely to be very different because the risks from involuntary smoking result from the actions of others. In addition, the exposure often occurs in settings over which nonsmokers have little control. These factors alter the public policy issues and the mechanisms for addressing them. These issues include:

- What level of risk to nonsmokers should be tolerated? Should the policy goal be the total elimination of exposure to tobacco smoke for those who do not smoke? Is it sufficient to eliminate exposure for those for whom the exposure is the greatest or who are at special risk or should it be eliminated entirely?
- How much exposure is tolerable and under what conditions?
- What should be done to protect infants and young children in the home?

- What can and should be done to protect children when they are in the care of institutions, such as daycare centers and schools?

- When should government intervene to protect the health of the nonsmoker and when should the resolution of this issue be left to the private sector?

- Who bears the burden of protecting the nonsmoker? In the home? In public buildings? In the workplace?

- What role should existing regulatory mechanisms, such as OSHA play, and at what level of government? Are new approaches and new laws needed?

- Who should be legally responsible for injuries suffered by nonsmokers from involuntary smoking?

- What role should the courts take in apportioning responsibility and liability for injuries resulting from involuntary smoking?

These are important questions which policy makers need to carefully consider. Government leaders, private sector employers, work supervisors, store owners, smoking parents and any individual who smokes in the presence of nonsmokers all have some degree of responsibility.

I. THE FINDINGS OF THE NATIONAL RESEARCH COUNCIL AND THE SURGEON GENERAL

After examining the available evidence, the National Research Council's Committee on Passive Smoking and the Surgeon General concluded:

1. Involuntary smoking is a cause of disease, including lung cancer, in otherwise healthy nonsmokers.

2. Infants and children exposed to tobacco smoke in the home have an increased incidence of serious respiratory infections such as bronchitis and pneumonia in early childhood, and smaller rates of increase in lung function as the lung matures.

3. Healthy nonsmokers exposed to tobacco smoke in the air experience acute physical reactions including eye, nose and throat irritation.

4. The simple separation of smokers and nonsmokers in the same air space does not eliminate the exposure of nonsmokers to the harmful constituents found in airborne tobacco smoke.

Preliminary studies have identified other risks to nonsmokers, including a reduction in the lung function of healthy adult nonsmokers, 1/ a higher risk for heart disease and an increased incidence of death from heart attack in individuals with pre-existing heart disease married to smokers, 2/ and the exacerbation of symptoms in individuals with pre-existing lung disease or who are sensitive to tobacco smoke. 3/

The two Reports draw a careful distinction between those areas in which there is sufficient scientific evidence to conclude that involuntary smoking is a proven health hazard and those areas in which more research is needed. For example, while the Reports find the evidence sufficient to conclude that involuntary smoking increases the risk of lung cancer in nonsmokers, they also conclude that additional research is needed before the same can be said for the relationship between involuntary smoking and cardiovascular disease, cancers other than lung cancer, and decreases in lung function in otherwise healthy adults. The fact that the two Reports cautiously emphasize the need for more research in certain areas heightens the significance of their conclusions in those areas where they find the scientific evidence sufficient to draw meaningful scientific conclusions.

A. INVOLUNTARY SMOKING AND LUNG CANCER

The NRC and the Surgeon General concluded that involuntary smoking increases the risk for lung cancer in nonsmokers. The NRC report estimates that the increased risk of lung cancer for involuntary smokers ranges from 14 to 66%. 4/

The NRC risk range is based on a review of thirteen different studies on involuntary smoking and lung cancer conducted internationally and in the United States. Considering the worldwide data as a whole, the NRC estimates an average 34% higher risk of lung cancer for nonsmokers regularly exposed to tobacco smoke. 5/ Using only the data from studies conducted in the United States, the NRC estimates the relative increased risk of lung cancer to be 14%, 6/ accounting for approximately 2400 lung cancer deaths among nonsmokers in 1985. 7/ Based upon the NRC's figures, with the exception of asbestos, involuntary smoking causes more deaths than all of the other airborne pollutants regulated by the Environmental Protection Agency combined. 8/

Although the majority of the studies on involuntary smoking and lung cancer use wives of smoking husbands as subjects, and have measured their exposure in the home, the Surgeon General's report states that there is no reason to believe that the increased risk of lung cancer is limited to exposure in the home. In fact, in the United States nonsmokers often may be exposed to tobacco smoke for longer periods of time in the workplace. The finding that regular exposure to tobacco smoke increases the nonsmoker's risk for lung cancer is applicable to any enclosed environment, although the relative risks may vary depending on factors such as ventilation rates, the number of smokers, the proximity of smokers, and similar considerations.

B. INVOLUNTARY SMOKING IN CHILDREN

Both reports found that exposure to tobacco smoke is associated with a variety of adverse health impacts in infants and children. The Chairman of the NRC Committee

stated that studies of children exposed to smoke at home are "remarkably consistent" in showing that such exposure is "clearly harmful" to children of smoking parents. 9/ The Surgeon General's report reaches the same conclusion. 10/

The NRC and Surgeon General's Reports review the results of more than 25 studies comparing children of smoking parents with children of nonsmoking parents. The studies measure the effects of tobacco smoke exposure on respiratory symptoms, pulmonary function, and respiratory tract illness. 11/

The data indicate that children of smoking parents develop lower respiratory tract illnesses such as bronchitis and pneumonia up to twice as often in the first year of life as children with nonsmoking parents. 12/ Respiratory symptoms, such as cough, sputum, and wheezing, occur in children exposed to tobacco smoke in a ratio from 1.2 to 1.8 compared to children of nonsmokers. 13/ Decreases in lung function (FEV) in children of smoking parents range from zero to 0.5% per year, a small effect but possibly significant in the overall development of chronic obstructive lung disease in later life.14/

Other studies have examined the effect of chronic involuntary smoking by children on subsequent height and weight development. 15/ The association of chronic ear infections and effusions in children with parents who smoke at home also has been studied. 16/ In addition, the NRC reviewed several studies which show a decrease in lung function in children of smokers, and others which found lower birth weights for babies born to nonsmoking mothers whose spouses smoke, and stunted growth in children with smoking parents. 17/ Both Reports also recommend that additional research be conducted to further examine and quantify these risks for children and both the NRC Committee and the Surgeon General recommend that parents eliminate smoke from the environment of small children. 18/

C. ACUTE REACTIONS TO TOBACCO SMOKE

The reports indicate that there are observable and serious short term, acute physical reactions in nonsmokers exposed to tobacco smoke. Many nonsmokers experience some level of physical irritation and discomfort in the presence of tobacco smoke. For some, these symptoms may become severe, especially in individuals with pre-existing respiratory problems, such as asthma, emphysema, or allergies. 19/

The most common acute effects include irritation of the eyes, nose and throat. 20/ Both Reports note that scientific questions have been raised about the impact of tobacco smoke on allergy sensitive individuals, asthmatics and others with obstructive lung disorders. Although the evidence to date is preliminary, several studies have shown that asthmatics experience significant pulmonary impairment as a result of involuntary smoking. 21/ Other sensitive persons, such as those with allergies, may also experience significantly more severe acute reactions to tobacco smoke. 22/ Both reports recommend more research in this area, as well as on the acute cardiovascular effects (blood pressure, heart rate) in healthy subjects exposed to tobacco smoke.

To mitigate the acute effects of involuntary smoking in 80% of nonsmokers, the NRC found that ventilation rates at least five times those normally required in non-smoking environments are needed where smoking is permitted. 23/ Finally, the NRC found that the benefits of increased ventilation rates are only observable on the short term acute effects of involuntary smoking. The NRC was not able to identify what, if any, ventilation rate would be needed to reduce the risk for lung cancer.

Conclusion

The reports of the NRC and the Surgeon General establish that involuntary smoking is a serious public health hazard. While future research is needed to more fully understand the complete scope of the hazard, the reports make clear that it can cause lung cancer and severe, acute effects in many individuals and does pose a particularly serious hazard to infants and children.

II. POLICY IMPLICATIONS

The scientific conclusion that involuntary smoking poses a serious health hazard is likely to prompt a thorough examination of what actions have been taken and what new policy considerations are raised by these Reports. The home, the workplace, buses, airplanes and other means of transportation, and other public places where smokers and nonsmokers mix each pose different policy issues. This section will explore the different sites in which nonsmokers are exposed to tobacco smoke, and examine the alternatives available to address the problem of involuntary smoking in each setting.

A. INVOLUNTARY SMOKING IN THE HOME

The NRC Committee and the Surgeon General recommended that all tobacco smoke be eliminated from the environment of small children. The Surgeon General called parental smoking in the home a form of child abuse. Previous concerns expressed by health officials about parents who smoke have focused on the behavioral issues, i.e., parents as role models for children, and parental smoking as an implicit endorsement and encouragement to the child to start smoking. The new findings alter these concerns.

The fact that smoking in the home jeopardizes the health of their spouses, infants and young children raises the question: how can these family members be protected? While the risk of injury in the home is well documented, fewer policy options are available for addressing these issues in the home than in any other setting. Traditional governmental and judicial mechanisms for discouraging harmful behavior and apportioning responsibility and liability for actions by non-family members outside of the home provide little guidance in this setting.

Background

The protection of children and other family members in the home is governed by state law rather than federal law. While these laws vary somewhat from state to state, they generally apply only to cases of severe abuse and/or neglect, reflecting the

consensus that government intervention into private family affairs is to be tolerated only in crisis-intervention situations to prevent serious, imminent injury. Typically, government officials have no authority to intervene to protect a child in the home unless a court has probable cause to believe that a child is in serious physical danger or that an emergency exists. 24/ Law suits between family members also have been looked upon with disfavor. For most of this century, family members were not permitted to sue each other. The Doctrine of Interspousal Immunity, followed in virtually every jurisdiction in the United States until about twenty-five years ago, prohibited one spouse from suing another for compensation for wrongful injury. 25/ While this doctrine has been abrogated or limited in all but ten states, 26/ it reflects a still pervasive view that government, in general, and the Courts, in particular, have a narrowly circumscribed role in resolving intra-family matters. Thus, despite the harm smoking can cause in the home, direct government intervention, legislatively or judicially, is not likely.

Policy Options

Public education is likely to be the most effective means immediately available to protect children and nonsmoking spouses from the risk of involuntary smoking in the home. Any such effort would depend upon educational messages designed to make all parents and smoking spouses aware of the impact of their smoking on the health of their children and other family members. This public education process requires the involvement of both the public and private sectors. The federal government has the capability both of generating its own educational material and acting as a catalyst for independent efforts by the public and private sectors at the state and local level. In the past several years the federal government and the private voluntary health sector have initiated public education campaigns directed at mothers who smoke, drink, or use drugs to inform them of the harm these habits can cause to the fetus. The evidence of the harm caused to infants by involuntary smoking should be incorporated into this and similar campaigns.

The role of government in this educational effort is limited. First, it can dedicate resources to a broad public education campaign about the hazards of involuntary smoking in the home. Second, it can take responsibility for ensuring that those who can deliver the message are motivated and have the information they need.

The voluntary health sector, including health professionals' associations, and community and school-based organizations with access to parents are another critical component of an overall educational effort. Specialists such as pediatricians, obstetricians, and gynecologists are in a position to play a key role in disseminating this information to parents and parents-to-be, most of whom look to these physicians for guidance and assistance in caring for their children.

Physicians providing pre-natal care are in a unique position to influence the smoking behavior of mothers-to-be and their spouses, both during the pregnancy and after the baby is born. Birthing and parenting classes also present important opportunities to inform parents-to-be of this health hazard to their child. Internists and other general practitioners who provide health care to adults and who are currently warning their patients about the hazards of active smoking can promote awareness of the hazards of environmental tobacco smoke. Finally, pediatricians who treat children of smokers are in a position to emphasize the significance of the hazards of involuntary smoking and to counsel parents.

Private sector efforts need not be limited to health professionals. Schools, parent teacher organizations, community recreational and athletic programs and others can educate directly or through school aged children. Another traditional source of information for and influence in the family setting is organized religion. Religious leaders, by providing this information to many adults and children in their congregations who might not otherwise receive it, can contribute to the general public education effort on this issue as they have on other non-religious subjects. All of these efforts need to target both parents and children, as experience has shown that as children have been

taught about the dangers of smoking, they often have carried this information back to their parents. Given the evidence about the hazards of involuntary smoking, children need to be educated so that they may become advocates for their own health both by encouraging their parents to quit and by avoiding the smoke at home or elsewhere.

B. CHILDREN AND INVOLUNTARY SMOKING OUTSIDE THE HOME

Children also are exposed to airborne tobacco smoke in environments outside the home. Many children spend a significant portion of their daily life in either day care centers or schools and in waiting rooms in hospitals, physicians' offices and other health care delivery sites. Much of this time occurs during critical years in the physical development of the child when sensitivity to the adverse effects of involuntary smoking may be at its peak. Given the evidence, there is reason for concern about the cumulative exposure of infants and children to tobacco smoke on a regular basis in environments other than the home.

Background

The restraints which limit governmental action in the home do not exist in other settings. Although regulations and laws vary from state to state and from site to site, day care centers, schools, hospitals and other health care delivery sites are subject to government regulation in many states. The question is whether these statutes and/or regulations are adequate to protect these children from involuntary smoking. Currently, smoking is legislatively regulated in day care facilities only to the extent they happen to fall within the definition of a "public place" in clean indoor air legislation. Although 27 states have enacted some restrictions on smoking in school buildings, only two - Alaska and Arkansas - appear to have specifically listed day care centers as public buildings covered by their Clean Indoor Air Act. 27/ These two states do not address the particular concerns posed by day care centers.

In addition, no data exist as to the number of day care centers which have acted

on their own to protect children under their care from involuntary smoking. The data which are available concern elementary and secondary schools rather than day care centers and other pre-school facilities. A 1986 survey by the National School Boards Association (NSBA) of 2000 school districts nationwide found that 87% of the 714 respondents have a written policy and/or regulations governing smoking in the schools. Approximately half (47% of the respondents) have banned all smoking by students in school buildings, on school grounds, or at school functions. Many others prohibit smoking by students except in designated areas or outside of the school buildings. However, only 2% of these school districts have similar restrictions on smoking by faculty and administration. Most school districts (81%) permit smoking by faculty and administration in designated areas inside school buildings. 72% of the school districts responding to NSBA's survey indicated that the health hazards associated with smoking were a major factor in the decision to institute smoking policies, although concerns about role modeling, peer pressure, and compliance with state and local statutes governing the legal age for purchasing tobacco products, or governing smoking in public places (clean indoor air laws) were also cited. Even in North Carolina, the leading producer of tobacco, 28 out of the state's 40 school systems have adopted a total ban on smoking by students since 1979. Moreover, in Winston-Salem, the home of R.J. Reynolds Tobacco Company, a 1986 survey revealed that 86% of parents and 62% of students support a total ban on smoking on school grounds. 28/

Thirty-two states plus the District of Columbia restrict smoking in hospitals. 29/ As is the case with schools, smoking policies in hospitals may vary from site to site. Some hospitals prohibit smoking only where it poses a safety hazard, such as near combustible material; others assign patient beds by smoking status and provide designated smoking and non-smoking areas in waiting rooms and other public areas. Still others prohibit smoking throughout the facility or limit it to areas not frequented by patients. 30/ Despite these policies, survey data reveal that smoking is still widely

permitted in patient areas in hospitals and fewer than half have nonsmoking areas in waiting rooms or lobbies. 31/ The rules of the Joint Commission on the Accreditation of Hospitals (JCAH), the organization whose standards establish the norm in health care settings, require that hospitals have hospital-wide smoking policies, but do not include any standards for such policies. Thus, a hospital may permit smoking throughout its facilities, patient care and waiting areas and meet the JCAH smoking policy requirement. Ironically, while providing little concrete protection for patients, the JCAH standards do provide that smoking must be restricted in areas where equipment, such as oxygen tanks, pose a hazard.

Separate from any state, local or privately mandated standards for places where children may be exposed to tobacco smoke, the tort law in most jurisdictions places a burden on those who care for young children to exercise reasonable care to protect them from reasonably forseeable hazards. This duty has been interpreted to mean the exercise of such care "as a parent of ordinary prudence would observe in comparable circumstances." 32/ The recent reports may be particularly significant in establishing liability and apportioning responsibility in these settings because common law tort principles limit liability to those injuries which are reasonably forseeable, 33/ and involuntary smoking-related injuries now are substantially more likely to be found to be reasonably forseeable. While there are no cases reported in the United States involving injuries to children from involuntary smoking in day care centers or similar settings, in light of the newly released findings, it would not be unrealistic to expect the courts to be asked to examine the extent to which day care operators and others who fail to take reasonable steps to protect the children under their supervision from tobacco smoke should be held legally responsible for any smoking-related injuries suffered by those children.

Policy Options

Little information exists about protections currently being provided to infants and young children against the hazards of environmental tobacco smoke. No survey data exist and the traditional regulatory bodies have not focused their attention on this problem. Data need to be collected and a comprehensive approach developed. Direct governmental regulation, particularly at the state and local level, could bring about a rapid change in the protection currently provided. Regulations which govern day care centers, schools, and health care facilities, as well as existing and proposed clean indoor air legislation covering public places and the workplace, should be reviewed and examined to determine the extent to which they take into account the particular risks involuntary smoking poses for children. Specific rules to protect children in these settings may be necessary. These could include: prohibiting smoking in any part of a building where the ventilation recirculates the air into areas used by children; and prohibiting teachers and/or caretakers or other employees from smoking if the institution's ventilation system recirculates air from the room(s) set aside for smoking.

Private sector initiatives also can have a direct impact. Local and state school boards, school administrators, PTA's, school health providers, religious leaders and health educators are all in a position to bring about appropriate changes in policies governing smoking in and around day care centers and schools and need to be made aware of the findings in these reports. Similarly, the Joint Commission on the Accreditation of Hospitals could play a significant role in protecting children exposed to environmental tobacco smoke in health care facilities by revising their requirements. Organizations like the American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc. (ASHRAE), which produce widely accepted minimum ventilation and indoor air quality rates also need to review and revise their current standards to take into account the hazards of involuntary smoking.

C. INVOLUNTARY SMOKING IN PUBLIC PLACES

Nonsmokers are exposed to tobacco smoke whether or not they live with a smoker or work in a place where smoking is permitted. It is virtually impossible to live a normal existence without being exposed to some level of tobacco smoke during some part of the day, whether the exposure takes place in grocery store check out lines, restaurants, municipal buildings or at sporting events or public meetings.

The reports of the Surgeon General and the National Research Council base their findings on studies which document the long-term health hazards to individuals who breathe tobacco smoke in the air at home. These studies do not isolate the effects of the repeated short-term exposure which occurs in public places. Nonetheless, the data provide reason for concern about the cumulative effects of tobacco smoke exposure in public places. Both reports point out that exposure to tobacco smoke, even for a relatively short period of time, commonly causes acute effects, such as eye, nose and throat irritation and may cause more serious acute effects in highly sensitive individuals. Both reports also provide reason for concern that this short-term exposure may contribute to the increased risk of lung cancer for nonsmokers, because it contributes to the overall amount of tobacco smoke a nonsmoker inhales, a fact which may be of particular concern for those also exposed at home or at work. Thus, while the primary health effects of repeated short-term exposures in public places are the more visible acute effects, the cumulative impact of these exposures in conjunction with exposures in the home and workplace also should be considered in determining what steps are necessary to protect nonsmokers.

Background

The Surgeon General's report defines a public place as any enclosed area in which the public is permitted or to which the public is invited. 34/ Examples of public places include, but are not limited to educational facilities, health care facilities, public transportation facilities, reception areas and areas open to the general public in office

buildings and government buildings, restaurants, grocery stores, bars, sports arenas, retail stores, theaters, and waiting rooms. In short, a public place encompasses almost any place the public is permitted outside the home.

Smoking in public places poses different issues than either smoking at home or at the workplace and these distinctions affect the policy alternatives available to protect nonsmokers. Traditional restraints against governmental intrusion into the home and against judicial interference in family relationships do not apply, and, thus, direct legislative and regulatory action is likely to continue to be the most widely used mechanism for protecting nonsmokers in public places.

While the judicial system has acted as a catalyst for public and private sector action to protect nonsmokers in the workplace, the Courts have played virtually no role in prompting action to protect nonsmokers in public places. The reasons for the judiciary's lack of involvement in protecting nonsmokers in public places differs from the reasons why it has played no role with regard to smoking in the home. While public policy considerations limit government and judicial involvement in protecting family members in the home, the major impediments to judicial involvement to protect nonsmokers in public places have been factual and scientific. Store owners and others responsible for public places do have a legal obligation to exercise reasonable care to keep their premises in a safe condition, to discover dangerous conditions and to remedy them in order to protect those who enter the premises. 35/ Owners and custodians of these public places are not insurers of the safety of their visitors. Their duty is to exercise "reasonable care," but that obligation extends to everything that threatens a visitor with a forseeable, unreasonable risk of harm, unless the visitor is aware of the dangerous condition and knowingly exposes himself to that risk. 36/

An essential element of any lawsuit seeking damages for personal injury is the ability to prove that the injury, in fact, was caused by the action or inaction of a particular party or parties. Normally, a person in any one public place is exposed to

tobacco smoke in the air for a relatively short period of time and may also be exposed to tobacco smoke in a number of different public places each day. In contrast, exposure to tobacco smoke at work is likely to be for a longer duration and easier to isolate. The same or a similar exposure also is likely to occur day after day, possibly for years. These distinctions make it more difficult for an injured nonsmoker to establish that a smoking related injury was the result of exposure in a specific public place. The two Reports provide support for the conclusion that exposure to tobacco smoke in public places may be harmful and/or may contribute to the overall risk of disease from involuntary smoking. However, given the individual's typical exposure to smoke in public places and the state of the current scientific evidence, it still appears unlikely in the near future that the Courts will hold an owner or custodian of a particular public place liable for a nonsmokers long-term injury.

At present, the judicial process may offer a more viable alternative for those individuals who suffer an immediate, acute reaction from exposure to tobacco smoke These individuals are in a substantially better position to prove the causal link between their acute reaction and their exposure to smoke at a particular location. The general, well accepted legal principles which require owners and custodians of places visited by the general public to keep their premises in a safe condition would appear to be applicable to the situation in which a nonsmoker suffers an acute reaction, depending upon the setting, the reasonableness of the action taken to protect nonsmokers, and whether the courts find that the nonsmoker should have been aware of the risk and knowingly exposed himself to it.

The possibility of increased judicial activity raises another interesting question about whether there is a correlation between the threat of judicial action and private sector voluntary corrective action. Where direct legislative and regulatory action to protect nonsmokers has not been taken, there appear to be more reports of voluntary actions by employers aware of the threat of judicial intervention then by owners and

custodians of public places who have not faced such a threat. It is unclear whether this is because of the risk of judicial action or for other reasons.

To date, state and local legislatures have taken the lead in protecting the public from the hazards of involuntary smoking in public places. As of 1986, 41 states and the District of Columbia have enacted state-wide laws regulating smoking in at least one public space. Among the nine states without any legislation to restrict smoking in public places are the three major tobacco-producing states: North Carolina, Virginia and Tennessee. 37/ In addition to state legislation, many local jurisdictions (cities, counties) have enacted smoking restrictions, including seventy-four communities in California. 38/

The majority of the current laws regulating smoking were enacted in the past decade, with 23 new laws enacted by sixteen states since 1980. 39/ However, these laws vary substantially in comprehensiveness. The primary stated purpose of the more recent legislation is to protect the health and comfort of the public by designating areas in which smoking is permitted. 40/ While the mechanism for enforcement of these smoking policies varies from jurisdiction to jurisdiction, the common experience has been that these policies cause few enforcement problems and have been largely self-enforcing. 41/ Further, public opinion polls show overwhelming support for restrictions on smoking in public places both among nonsmokers and smokers. For example, a 1986 American Cancer Society poll found that 93% of current cigarette smokers, and 95% of nonsmokers, favored "no smoking" sections in public places. 42/

Most current state and local policies regulating smoking in public places, like those governing the workplace, are the product of a series of political and practical compromises. Many of these compromises have been unrelated to the scientific evidence about the health risks to nonsmokers. For instance, many policies require the simple separation of smokers and nonsmokers in public transit facilities, restaurants and other public facilities without regard to whether they share the same airspace. However, the Surgeon General's report notes that the separation of smokers and nonsmokers in the

same airspace does not eliminate the nonsmoker's exposure to tobacco smoke. There is no evidence that such a policy, while reducing some acute irritations, eliminates the health risks to nonsmokers. These policies permit smokers to continue to smoke in settings in which nonsmokers will be exposed to at least some level of tobacco smoke. The recent Reports provide no support for an assumption that the exposure of nonsmokers to just some tobacco smoke is not harmful.

Other policies which are the result of political and/or practical compromises totally or partially exempt many areas where the public is exposed to smoke. Most often these exemptions cover bars, restaurants seating fifty or fewer and other retail establishments. For instance, in Alaska, smoking is restricted in "food establishments" seating 50 or more persons; in Connecticut, smoking is restricted to designated areas in restaurants seating 75 or more, except during private functions. New Jersey, which requires private employers to establish smoking policies and totally prohibits smoking in a broad range of public facilities, "encourages" restaurants to establish nonsmoking areas. 43/ Many reasons have been given for these exemptions. Restaurant owners have argued that it is impossible to separate smokers and nonsmokers in small restaurants. Restaurant and bar owners also have argued that restrictions on smoking in their establishments would be costly to implement and would hurt business. However, these concerns have not been borne out by experience. In jurisdictions with strong clean indoor air acts, the available evidence, albeit mostly anecdotal, is that protections for nonsmokers have cost little to implement and, if anything, have been good for business. 44/

With the exception of the Department of Transportation rules governing smoking aboard commercial aircraft and the Interstate Commerce Commission's regulations governing smoking on interstate buses, the federal government's role in protecting nonsmokers has been confined to those agencies which have promulgated regulations to govern their own employees. Legislation to restrict smoking to designated areas in all

federal buildings was introduced in the Ninty-Ninth Congress, but was not enacted. Similar legislation has been introduced in the One-Hundredth Congress and is pending.

Several different federal agencies have addressed the problem of involuntary smoking within the buildings under their control. Although these policies affect visitors to these buildings, these actions have been prompted primarily by management concerns for the health and safety of employees. In the Postal Service, which administers 25% of all Federal office space and employs over 700,000 workers, smoking restrictions exist, but were implemented primarily to protect the highly flammable mail. 45/ Current Postal Service smoking regulations prohibit employee smoking "while receiving mail from the public, around conveyor belt tunnels, collecting mail from letter boxes, loading or unloading mail, distributing mail into pouches and sacks, or handling, working or closing pouches or sacks on racks." 46/ This prohibition applies primarily to workroom areas. In contrast, the regulations governing smoking in Postal Service office space do not establish a specific procedure for developing smoking policies and result in varying policies from office to office. 47/

The General Services Administration (GSA), and the Department of Defense (DoD), which with the Postal Service administer 90% of all Federal office space, have each recently revised their smoking policies. In response to the GSA regulations, on May 6, 1987 the Department of Health and Human Services (DHHS) announced a policy banning smoking entirely in all of their buildings. In addition, the Veterans Administration, which administers 172 VA medical centers and 225 clinics, has also recently updated its smoking policies. 48/

The General Services Administration is the largest single source of workplace smoking policies for civilian Federal employees. 49/ On December 8, 1986, the GSA issued final revisions to its smoking regulations which took effect February 8, 1987. The new regulations, issued "In recognition of the increased health hazards of passive smoke on the nonsmoker," specify that "smoking is to be held to an absolute minimum in areas

where there are nonsmokers." 50/ While modestly more stringent than prior restrictions, the revised GSA smoking regulations still allow for the exposure of nonsmokers to tobacco smoke in GSA facilities because they permit smoking in space shared by smokers and nonsmokers such as hallways, cafeterias and restrooms. Smoking also is allowed in open office space provided the local administration concludes that the configuration and ventilation of the space adequately protects the nonsmoker. Whether these regulations will be effective is uncertain. The regulations decentralize implementation and enforcement and place substantial responsibility in the hands of local agency administrators. The regulations also provide local administrators with no concrete standards, thereby increasing the possibility of variations in application.

In March 1986, the Secretary of Defense issued a health promotion directive which included the initiation of "an aggressive anti-smoking campaign." More stringent limitations on smoking in DoD facilities, approximately 30% of all Federal office space, are included in the directive. It requires the establishment of nonsmoking areas in all eating facilities, and prohibits smoking in common work areas unless adequate space and ventilation is available to provide "a healthy environment." However, like the GSA regulations, the DoD regulations do not define "healthy environment" and so it is unclear how stringently this requirement will be enforced. 51/

The Veterans Administration implemented new smoking regulations in March of 1986. These regulations represent a significant change from previous policies. They restrict all smoking to designated areas. 52/ Finally, the Indian Health Service of the U.S. Public Health Service is now virtually smokefree, and the Assistant Secretary for Health of the Department of Health and Human Services upon release of the 1986 Surgeon General's report, announced the initiation of an effort to make the entire Public Health Service smoke-free. The May 6th announcement from the DHHS will effect a smoke-free policy throughout the Department.

In the private sector, there are examples of voluntary action to protect nonsmokers in public places. Some restaurants have instituted nonsmoking sections. Several national hotel chains, including Hilton Hotels, Hyatt Hotels, Westin Hotels, Quality Inns, and Embassy Suites, now require a specific proportion of their rooms to be designated as nonsmoking, often imposing an additional charge on violations of the policy. 53/ Many have also instituted nonsmoking sections in their dining facilities whether or not such policies are required by law. However, a regular pattern of such voluntary action among private sector custodians of public places has yet to emerge.

Policy Options

There remain substantial gaps in the protections provided to nonsmokers in public places. The Reports highlight the need for the development of a comprehensive approach to fill these gaps. The primary response is likely to come from four separate sources: State and local legislative bodies, the courts, voluntary action and the federal government.

State and local legislative bodies have been in the forefront of efforts to protect nonsmokers in public places. The findings of the Reports provide a stronger public health basis for action as well as scientific guidance for what needs to be done. Legislators in states and localities with no protections for nonsmokers need to be provided this information together with guidance on appropriate protections. The findings also should be cause for state and local governments which already have clean indoor air requirements to re-evaluate their policies.

Many private sector organizations who have played a leadership role now recognize the importance of political action at the state and local level as an essential part of any overall effort to minimize the health impact of involuntary smoking. Organizations such as the American Lung Association, the American Heart Association and the American Cancer Society already have created a joint project to encourage their state and local affiliates to form coalitions in support of stronger clean indoor air

protections. Californians for Nonsmokers' Rights, the organization which has played a leading role in the passage of protections at the state and local level in California also concluded that the scientific evidence requires the passage of similar legislation at the state and local level throughout the rest of the nation and changed its name to Americans for Nonsmokers' Rights and expanded its scope accordingly.

In addition to state and local governmental actions, the judiciary may act as a catalyst in prompting voluntary efforts to protect nonsmokers. As noted above, the two Reports provide medical evidence which may support court actions against custodians of public places who do not exercise "reasonable care" to ensure that nonsmokers visiting their premises are not harmed by tobacco smoke. The Reports increase the likelihood of such litigation.

The private sector also may play a critical role in any overall effort to protect nonsmokers. Many of the public places such as restaurants, grocery stores and movie theaters covered by existing clean indoor air laws are owned and operated by the private sector. Business associations such as the Chambers of Commerce, the National Restaurant Association, and other business/trade associations can act as either an impediment to or a supporter of voluntary actions to protect nonsmokers. The more these associations are educated about the findings of these reports, the ease with which earlier acts have been implemented, the positive or at least, neutral effect that earlier clean indoor air acts have had on business and the possible legal responsibility faced by those who fail to act, the more likely they will be to play a positive role. Currently, the National Restaurant Association recommends that its members respond to consumer demands for nonsmoking sections; such a recommendation could both be expanded and made more specific. Other actions, such as a recommendation supportive of the creation of nonsmoking rooms and floors in major hotel chains, could compliment and coincide with state or local regulatory action, thereby enhancing effective implementation and enforcement of protections for nonsmokers in a wide range of public places, minimizing

the negative effect of government regulation on these members of the private sector business community and reducing the risk of judicial intervention.

Although the Federal government's role in this area is limited, the Reports support the need to ensure that nonsmoking Federal workers and visitors to Federal buildings are adequately protected from the hazards of involuntary smoking. Another option, but one not necessarily designed to replace action at the other levels of government, is the possible role of the Environmental Protection Agency (EPA). To date the EPA has not regulated substances in any medium without a specific legislative mandate, such as the Clean Air Act or the Clean Water Act. Nonetheless, EPA's mandate is broad. The Reorganization Plan No. 3 of 1970, in which President Nixon proposed the creation of the Environmental Protection Agency, states: 54/

> The EPA would have the capacity to do research in important pollutants irrespective of the media in which they appear, and on the impact of these pollutants on the total environment . . . With these data, the EPA would be able to establish quantitative environmental baselines . . .
>
> . . . the EPA would be able - - in concert with the states - - to set and enforce standards for air and water quality and for individual pollutants.

The roles and functions of the EPA as enumerated in the President's message include:

- the establishment and enforcement of environmental protection standards consistent with national environmental goals.
- the conduct of research on the adverse effects of pollution and on methods and equipment for controlling it, the gathering of information on pollution, and the use of this information in strengthening environmental protection programs and recommending policy changes.

Recently the EPA established an indoor air program to report to the public on specific aspects of indoor air. 55/ The office currently plans to provide diagnostic, mitigation, and prevention information to the states and public about indoor air pollution similar to the functions of its existing program on radon pollution. EPA also was a sponsor of the National Research Council Report. However, there is no indication that EPA intends to develop exposure standards and/or apply risk assessment techniques to its examination of environmental tobacco smoke. Any examination of expanding EPA's

current role should include an analysis of whether this problem is best addressed at the Federal or at the state level, whether or not there is a need for quantifiable standards of exposure, and what scientific and technical problems would be involved in developing exposure standards.

D. INVOLUNTARY SMOKING IN PUBLIC CONVEYANCES

Millions of Americans use some form of public conveyance - bus, taxi, train, subway, airplane - on a daily basis. On airplanes alone Americans take more than 300 million trips annually. 56/ The smoking population using public conveyances reflects the percentage of the general population (approximately 30%) which smokes. 57/ However, the enclosed environment, limited air circulation, and close proximity of passengers common to most public conveyances may aggravate the acute, irritating effects of involuntary smoking for both passengers and crew. On airplanes, the cabin environment creates concentrations of tobacco smoke higher than those normally found in other public places. 58/ Many examples of short term acute effects of this kind of exposure have been presented to the Civil Aeronautics Board (CAB). The long term effects of this kind of exposure have not been explored in depth, but for airplane cabin crews it is estimated that a flight attendant working full time is receiving an exposure to airborne tobacco smoke approximately equal to that associated with living with a one pack-a-day smoker. 59/ Exposure to environmental tobacco smoke has not been quantified in other types of public transportation vehicles or facilities, but the conclusions of two Reports raise the possibility that the exposure of passengers and crew in public conveyances is no less a public health concern than similar exposure in other environments.

In August 1986, the National Academy of Sciences' Committee on Airliner Cabin Air Quality issued a Congressionally-mandated report on the quality of the air found in the passenger sections of commercial aircraft. Among other contaminents, the Committee identified airborne tobacco smoke as a major health and safety hazard for

both passengers and crew. The Committee found that tobacco smoke in the air of airplanes "is a hazardous substance and is the most frequent source of complaint about aircraft air quality." The Committee added:

> Although the adverse effects of ETS are still under investigation, the Committee feels that this potential threat to the health of nonsmoking passengers and flight attendants should not be ignored, especially because flight attendants on some airlines can fly up to the twenty-eighth week of pregnancy. It is highly probable that eye, nose, and throat irritation will increase among airline passengers as outside-air ventilation rates are decreased and recirculation is increased to improve fuel efficiency.

The Committee concluded:

> The Committee recommends a ban on smoking on all domestic commercial flights, for four major reasons: to lessen irritation and discomfort to passengers and crew, to reduce potential health hazards to cabin crew associated with ETS, to eliminate the possibility of fires caused by cigarettes, and to bring the cabin air quality into line with established standards for other closed environments. 60/

Background

Federal, state, and local governments are each involved in the regulation of public conveyances and facilities. Interstate travel on buses and trains, and all airplane travel, is a federal regulatory responsibility. In-state facilities and conveyances such as bus systems, taxis, and subways, are regulated at the state and/or local level.

Within the Federal government, the Office of Intergovernmental and Consumer Affairs of the Department of Transporation (DOT) has responsibility for the regulation of smoking aboard commercial aircraft. The current regulations (14 C.F.R. Part 252) require that a nonsmoking section must be provided for passengers on all aircraft of 30 seats or more. Cigar and pipe smoking is prohibited in all commercial aircraft, and all smoking is prohibited in planes seating fewer than 30 passengers. In 1984, the now defunct CAB revised the regulations to require, inter alia, that airlines provide a nonsmoking seat to all nonsmoking passengers who meet the airline check-in deadlines, even if the airline has to expand the nonsmoking section. Airlines are also required to ban all smoking when an airplane's ventilation system is not fully functioning. In 1984

the CAB considered, then rejected, a proposal to ban all smoking on flights of two hours duration or less.

As of January 1, 1985 the CAB's authority to regulate smoking aboard commercial aircraft was transferred to the Department of Transportation. Since the transfer of this authority to DOT, no regulatory changes have been publicly considered. However, the August, 1986 Report, including the recommended ban on smoking, was presented to the Department of Transportation and the Federal Aviation Administration for review. By law, the Secretary of Tranportation was required to report to Congress with specific responses to each of the issues raised by the NAS report, but in early 1987 the Secretary announced that she was not prepared to recommend any regulatory changes concerning smoking as the result of the Report.

The findings of the Reports of the Surgeon General and the National Research Council, when read in conjunction with the findings of the Committee on Airliner Cabin Air Quality, raise serious questions about the sufficiency of the protections currently provided to passengers aboard commercial aircraft. These reports document the inadequacy of existing aircraft ventilation systems in reducing the concentration of tobacco smoke in aircraft and point out the health hazards associated with the exposure levels common in airplane passenger cabins today. For instance, the Cabin Air Quality report finds that there is no defined minimal ventilation rate for airplane passenger cabins and that air flow rates vary from aircraft to aircraft. Passenger cabin air flow rates range from below 7 cubic feet per minute (cfm) per economy class passenger to 50 cfm per first class passenger. 61/ Domestic airlines also are increasingly using air systems which recirculate air rather than bring in fresh air. The NAS estimates that by 1990, 40% of the seat-hours flown by US airlines will be on aircraft with recirculation systems. These ventilation systems have filters to remove some of the constituents of tobacco smoke such as lint, aerosols, gaseous tars, and micrometer-sized particles, but the NAS found that these filters are not capable of removing airborne tobacco smoke

vapors. 62/ Because most aircraft have no physical barriers between smoking and nonsmoking sections in the passenger cabin, the report found that there is also mixing of recirculated air between sections, thereby distributing tobacco smoke by-products to nonsmoking sections and throughout the passenger cabin. 63/

The NAS also found other reasons for particular concern about the concentration of tobacco smoke in the air of commercial aircraft. The pattern of cigarette smoking on airplanes differs from that found in public places generally, where normally one in nine persons may be smoking at any given time. On airplanes, smokers are concentrated in one area and smoking behavior is governed by the "no smoking" signal light, as well as meal and beverage service. These factors combine to create high concentrations of airborne tobacco smoke which accumulate not only in the smoking section but throughout the airplane cabin. According to the National Academy of Sciences, these concentrations of airborne tobacco smoke are higher than those normally occuring in other public places when smoking is permitted. 64/

With regard to the health hazards of involuntary smoking aboard aircraft, the Committee on Airliner Cabin Air Quality stated that: 65/

> Given the limited number of studies of exposure to ETS in aircraft, evidence of adverse health effects is inferred from studies in other environments. These include studies of chronic exposure, relevant to cabin crew, and studies of acute effects of exposure, relevant to the passengers.

A second area of federal jurisdiction is interstate bus and train travel. The Interstate Commerce Commission (ICC) has restricted smoking to designated areas on interstate buses since the early 1970's. These regulations, (49 CFR Part 1061) provide that cigarette, cigar or pipe smoking shall be limited to "a number of seats in the rear of the passenger-carrying motor vehicle, not to exceed 30 percent of the capacity of the said vehicle." This restriction does not apply to charter bus operations. In addition, the regulation allows "minor modifications in the special seating sections established [by this section] in order to assure the comfort of all passengers and the provision of safe,

adequate, and expeditious transportation service." What this means in practical terms is unclear.

The ICC used to regulate smoking on passenger railways, but the ICC's authority to regulate smoking on passenger railways was repealed in the late 1970's. 66/ Amtrak, owned and operated as a for-profit corporation by the National Railroad Passenger Corporation, established by the Rail Passenger Service Act of 1970 (45 U.S.C. Chapter 14 §501 et seq.), is not considered part of the Federal government and operates independently. Amtrak has developed and implemented a smoking policy which reflects the requirements once mandated by the Interstate Commerce Commission. The policy limits smoking to designated areas, including the designation of entire cars as smoking or nonsmoking, when the configuration of the train permits. The policy states that "every effort" should be made to maintain the maximum distance between smokers and nonsmokers, although cafe cars, snackbar cars, and lounge cars are uniformly designated as smoking cars on all trains. Full service dining cars are uniformly designated as nonsmoking cars during dining service, but may be designated as a smoking lounge car when dining activities have ceased. Pipe and cigar smoking is prohibited in cars which are divided into smoking and nonsmoking sections, and if an unreserved car in a train is designated as smoking, there must be another entire unreserved car designated as nonsmoking. How the smoking policy is enforced on each train is left to the discretion of the train's conductor. 67/ As an independent organization Amtrak has the power to alter and/or eliminate this policy without governmental approval.

A total of 35 states have enacted legislation to restrict smoking in public conveyances. Restrictions on smoking in public conveyances are the most commonly enacted state-wide smoking regulation. 68/ These restrictions vary widely. For example, Mississippi provides only that a bus driver may ask a passenger to stop smoking a cigar or pipe. If the passenger refuses he may be ejected from the bus. In contrast, Maryland specifically prohibits all smoking in any public mass transit bus, railcar, or

transit station, but not "public conveyances" generally. Four states (Florida, Georgia, Massachusetts and Washington) prohibit smoking entirely in any and all public conveyances and related facilities. Local ordinances, such as that proposed for New York City, also frequently address smoking in local public transportation systems, including taxis. In the District of Columbia, for example, taxi drivers are permitted to designate their vehicles as nonsmoking. 69/ The proposed New York City ordinance would prohibit all smoking in taxicabs, buses and other vehicles of public transport "during times in which the public is invited or permitted." 70/

Policy Options

Exposure to airborne tobacco smoke in public conveyances bears similarities to such exposure in other public places - - in many instances the exposure is a regular event, but one of relatively short duration. For those who fly frequently, it is a regular event which may last several hours at a time. For airline flight attendants, bus or taxi drivers, this exposure is not only a regular event, it is part of their work environment.

At the Federal level, further curbs on smoking aboard commercial aircraft and in interstate buses and trains are needed. The August 1986 NAS Report documents the risks to flight crews, some 70,000 of whom are exposed in flight as part of their job. More than half of all flight attendants (approximately 40,000) are exposed to the cabin environment for an average of approximately 900 hours every year. 71/ The NAS Report also addresses the hazards to airplane passengers, stating that the environmental conditions aboard airplanes have been found to exacerbate acute reactions to smoke. The most recent Reports complement the findings of the NAS Report on Airliner Cabin Air Quality and lend scientific weight to the recommendation that in-flight smoking be banned.

The Department of Transportation has the authority to further restrict or eliminate smoking aboard commercial aircraft on all domestic flights. This action can be taken administratively without further Congressional action or authority. Alternatively,

Congress has the power to limit or ban smoking on airplanes and on other forms of public conveyances. One bill in the United States Senate proposes a ban on smoking in all forms of public conveyance. Other bills in the U.S. House of Representatives propose a ban on smoking on all domestic airline flights.

The Courts could also play a role. The airline industry façes a greater risk of litigation by airline cabin crew members or nonsmoking passengers who claim to have been injured as the result of involuntary smoking than the owners and custodians of other public places. In 1983 and 1984, the Civil Aeronautics Board received reports of numerous incidents where passengers who are sensitive to tobacco smoke were seated in the nonsmoking section of airplanes and suffered acute reactions to tobacco smoke, sometimes requiring hospitalization, despite the current federal regulations governing smoking. Airline cabin crew members also have come forward to describe injuries and/or illness brought about by their exposure to tobacco smoke while working. Serious litigation has not resulted from these incidents in the past because of the lack of a solid scientific basis to demonstrate that involuntary smoking poses a health hazard to the general public, although at least one flight attendant has been awarded worker's compensation benefits as the result of tobacco related injuries she suffered while on the job. 72/

The Reports may increase the likelihood of litigation against airlines in the future. The legislation which authorizes the Department of Transportation to regulate smoking aboard commercial aircraft does not contain an express or implied preemption prohibiting private lawsuits by individuals who are injured as the result of the negligent failure of an airline to take reasonable steps to adequately protect the public from this forseeable harm. 73/ Therefore, airlines may not be immune from suit even if they comply with federal regulations. If the Federal government does not alter its rules, the airline industry on its own may need to consider steps to more adequately protect nonsmokers from harm. There is precedent for such voluntary action in both the United

States and Canada. Several years ago Muse Air, a Texas-based airline, later purchased by a larger air carrier, instituted nonsmoking flights. In 1986 Air Canada instituted nonsmoking flights on several of its most popular routes, an action which not only protected nonsmokers, but was a business success. In 1987 Air Canada expanded this practice to a number of flights between Canada and the U.S. In addition, unions and associations of flight crew members, such as the Association of Flight Attendants, are in a position to advocate additional voluntary or governmentally mandated protections for their members.

On other interstate conveyances under the jurisdiction of the Interstate Commerce Commission, consideration needs to be given to how to assure that nonsmoking passengers and crew are protected from involuntary smoking. On trains, the existing separation of smokers and nonsmokers into distinct cars protects the majority of passengers, but not the train crew members working in smoking cars. Requirements restricting smoking to only those areas used by smokers, and which are on a ventilation system distinct from those in nonsmoking areas, are needed on trains to adequately protect nonsmoking passengers and crew. On buses, where physical separation of smokers and nonsmokers is not possible, the situation is comparable to airplanes, and the evidence indicates that the complete elimination of tobacco smoke is the only way to ensure that drivers and passengers are protected.

At the national level, the Interstate Commerce Commission and Amtrak are the critical decision makers. At the state and local level the authority to act is spread out at different levels of government and among different governmental agencies. Many of these agencies, including the ICC, have made no revisions in their smoking rules even as the scientific evidence has accumulated during the past five years.

Here also, voluntary action by public and private owners and operators of buses, taxis and other forms of mass transit is a viable option, but one which is likely to have a large scale impact only if a substantial effort is made to educate those in authority to

act and to demonstrate the positive economic impact of additional protections for nonsmokers. Public transit workers' unions and service organizations also need to be educated about the necessity for more adequate protections for their members.

Finally, the general public, the users of these facilities, need to be made more aware of the hazards. The scientific evidence gives rise to particular concern about the possible risks for infants and children and pregnant women who regularly use mass transportation where smoking is permitted. Among public areas, protections for nonsmokers in public conveyances appear to be a priority.

E. INVOLUNTARY SMOKING IN THE WORKPLACE

While the studies considered by the Surgeon General and the National Research Council were of smoke exposure in the home environment, adults are exposed to tobacco smoke in the air as consistently and often for longer periods of time in the workplace. The health threat posed by smoking in the workplace also must be studied in light of the 1985 Surgeon General's report entitled Cancer and Chronic Lung Disease in the Workplace which examines in detail the effect of the interaction of cigarette smoke and exposure to other substances found in many workplaces, such as silica, asbestos, cotton dust and various pesticides. Nonsmokers in work environments who are exposed to other carcinogens and who breathe tobacco smoke in the air may face even more serious health risks.

The most immediate impact of the findings of the Reports may occur in the workplace. The reasons are two-fold. First, the legislative and regulatory branches of government have long considered within their authority the protection of workers against unnecessarily hazardous work environments. Second, while the Courts have played little role to date with regard to smoking in public places or in private homes, they have already recognized the right of employees to protection against the hazards of smoking in the workplace. Court decisions have established certain general principles which

require employers to protect nonsmokers and to compensate, directly or indirectly, nonsmokers for injuries they suffer at work as the result of tobacco smoke exposure.

There are, however, a number of other factors to be considered in discussing smoking in the workplace. First, despite the well established Federal statutory and regulatory authority to protect workers, the Federal government has not treated smoking in the workplace as an occupational hazard. The Federal Occupational Safety and Health Act (29 U.S.C. §651 et seq.) covers all employees in the United States who are engaged in business affecting commerce, but does not cover the U.S. Government, state governments, or political subdivisions of state governments. The Act requires that every employer covered by it furnish each employee "a place of employment which (is) free from recognized hazards that are causing or likely to cause death or serious physical harm." 74/ Federal regulations promulgated pursuant to the Act governing the Occupational Safety and Health Administration (OSHA) cancer policy require OSHA to establish criteria for the identification, classification and regulation of potential occupational carcinogens found in each workplace in the United States regulated by OSHA. These regulations further provide that

> "the Secretary, in promulgating standards dealing with toxic materials or harmful physical agents . . . shall set the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity even if such employee has regular exposure to the hazard dealt with by such standard for the period of his or her working life." 75/

Despite this mandate OSHA has never declared the exposure to tobacco smoke to be a "recognized hazard," or promulgated a standard to protect workers against environmental tobacco smoke. To date, OSHA has not indicated that it has any plans for the development of a standard to govern this risk. 76/ What change, if any, in OSHA's categorization and treatment of environmental tobacco smoke may result from the findings of the recently issued reports has not yet been determined.

Second, governmental authority over safety in the workplace is divided among Federal, state and local governmental bodies. None has fully occupied the field and this has left significant gaps. The federal act explicitly exempts employees of the Federal and state governments and their subdivisions from its scope. OSHA governs worker safety in some states, but in others it has no role because Section 18 (29 U.S.C. §667(b)) allows states to run their own job safety program if they meet certain requirements and in those states, it provides for the Federal government to cease its enforcement activities. In some states, smoking in most workplaces, including the private sector, is governed by separate state statutes. In others, only smoking in state governmental buildings is controlled by state law and workers in the private sector are left unprotected. In other states the state legislature has not addressed the issue of smoking in the workplace at all. To date, Congress has not addressed the problem of smoking in the Federal workplace or elsewhere, although many federal employees receive some protection from independent actions taken by the General Services Administration, the Department of Defense or their own agency. In those instances, the particular agency is acting in its capacity as an employer and not a regulator. In sum, there is no one location or level of government to look to for protection of individuals against the hazards of smoking in the workplace.

Third, many employees are members of unions which have been reluctant to take a leadership role on this issue apparently out of concern for offending their smoking members, focusing attention away from traditional occupational hazards, or harming their counterparts in the tobacco industry. 77/ In the United States, unions have long played a major role in protecting the health and safety of workers. However, unions represent both those whose behavior is causing the harm and those who are being injured. This conflict is particularly difficult for the AFL-CIO, which represents workers in the tobacco industry as well as many other workers. Consequently, it is not surprising that in early 1986 the AFL-CIO Executive Council announced its opposition to mandatory

smoking restrictions and called for the smoking issue to be "worked out voluntarily in individual workplaces between labor and management in a manner that protects the interests and rights of all workers." 78/ This position was taken prior to the issuance of the Reports and, therefore, without the benefit of their scientific findings about the nature and extent of the health hazard.

On the other hand, several major unions have expressed their support for actions to protect their nonsmoking members as long as those actions do not weaken or diminish their collective bargaining authority. Thus, in December 1986 several unions of federal employees, including the American Federation of Government Employees (AFGE) announced their support for the smoking regulations promulgated by the Federal General Services Administration (GSA) for Federal buildings under GSA's control. Several months earlier the AFGE had announced its support for legislation then pending in the U.S. House of Representatives to limit smoking in Federal buildings to protect nonsmokers after the bill's co-sponsors indicated a willingness to add a provision that clarified the union's role in the development and implementation of the regulations as part of the collective bargaining process. 79/

Fourth, as an occupational health and safety issue, involuntary smoking has several unusual attributes. As the United States economy becomes more service oriented, the findings of the Reports take on increasing significance. Unlike many of the more traditional occupational health and safety concerns, workers exposed to tobacco smoke in the air are found in very large numbers in white collar and service industry occupations as well as manufacturing and traditional blue collar jobs. Thirty years ago one of two non-agricultural workers was employed primarily in a service industry. Today, more than two out of three are so employed. 80/ In many instances, the service industry employee's exposure is the direct result of the behavior of the consumers they serve rather than the byproduct of a manufacturing process or the behavior of their co-

workers. For example, in addition to airline flight attendants and waitresses, bartenders often work in environments filled with the tobacco smoke of their customers.

Background

Smoking in the workplace is legislatively regulated to some extent by the laws of seventeen different states. Ten states specifically regulate smoking in private sector workplaces. 81/ A 1986 survey conducted by the Bureau of National Affairs with the cooperation of the American Society for Personnel Administration revealed that of 662 corporations polled, 36% have established workplace smoking policies designed primarily to address issues of employee health and/or comfort, 2% indicated plans to implement a smoking policy by the end of 1986 and 21% of the responding firms had such a policy under consideration at the time of the poll. Of those corporations with a smoking policy, 85% had instituted the policy within the last five years. Twenty-eight percent of those corporations with a policy limiting smoking in the workplace indicated that the primary reason for their action was a state or local law requiring them to develop a policy. Twenty-two percent indicated they developed their smoking policy as a result of their concern about employee health and comfort, while 21% indicated that their policy was the result of smoking-related employee complaints. An additional 10% indicated that they promulgated their policy in part as a result of employee complaints and in part as a result of either company health concerns or statutory requirements.

The protections provided to workers by these legislative and voluntary actions vary dramatically. The least restrictive workplace laws simply empower the employer to restrict smoking by posting signs without providing any further guidance as to where smoking is to be restricted. Another group of laws require an employer to develop a written smoking policy and post signs designating smoking and nonsmoking areas without providing the employer with any standards or direction. Slightly more protective laws require that employers designate nonsmoking areas. The most comprehensive laws prohibit smoking in the workplace except in designated areas. Some states with statutes

governing smoking in the workplace have provided exemptions for one or more work site areas, such as private offices. 82/

Voluntarily instituted policies also vary widely. Of those companies in the Bureau of National Affairs poll with policies protecting nonsmokers in the workplace, 41% banned smoking in all open areas, while 19% divided open areas into smoking and nonsmoking sections, 8% permitted smoking in all open work areas, and 6% banned smoking in all open work areas only if all employees in those areas agreed. Of those corporations polled with policies to protect nonsmokers, 66% banned smoking in hallways and 63% banned smoking in meeting or conference rooms. In cafeterias 58% of these corporations divide the cafeteria into smoking and nonsmoking sections while 24% have no restriction on smoking.

As with many statutes and ordinances which protect nonsmokers in public places, the actions already taken in the workplace reflect a series of compromises, some of them political and some practical and do not necessarily reflect a scientific analysis of what is necessary to safeguard against the health hazards. For example, a number of workplace statutes, such as in Connecticut and Pennsylvania, exempt businesses with fewer than a certain number of employees. As with many laws that exempt small businesses, this exemption often has been based on several concerns, including the practical difficulty of separating smokers and nonsmokers in a small physical setting and a desire to minimize government regulation of small business. The impact of these exemptions is substantial. Twenty-eight percent of all American non-governmental employees (over 20 million) work in business establishments with fewer than 20 employees; fifty-seven percent work in businesses with fewer than 100 employees. 83/

Other statutes, such as in Ohio, Montana and Colorado exempt certain businesses altogether, such as bars, bowling alleys and/or restaurants. These exemptions appear to reflect concerns expressed by owners of these businesses during the legislative process that their business would suffer if smoking by consumers was restricted in any portion of

their business establishment. Anecdotal evidence from states and municipalities which have covered these kinds of businesses indicate that such fears may be unjustified and that protections for nonsmokers which cover these establishments may even improve business. Nonetheless, these concerns continue to be expressed by restaurant owners and others in jurisdictions considering new laws to protect nonsmokers in public places and the workplace.

Finally, many workplace statutes enacted before the release of the recent reports require the simple separation of smokers and nonsmokers, but few, if any, address whether these separated workers continue to share the same air space. Smokers and nonsmokers, even if physically separated, may share the same air space if they occupy the same room or if the ventilation system in their workplace circulates air from one room to another.

The Surgeon General's finding that the simple separation of smokers and nonsmokers in the same air space does not protect nonsmokers may have particular significance for such workplace statutes and policies. Consequently, those corporations and state and local governments with smoking restrictions already in place need to carefully review them to determine whether their exemptions create gaps.

Involuntary Smoking in the Workplace and the Courts

While regulatory responsibility for protecting employees is diffuse, in a number of different situations the courts have found that the legal responsibility falls on the shoulders of employers. Even before the issuance of the Reports, several courts recognized the right to a work environment reasonably free of recognized health hazards. Other courts have found that nonsmokers injured by tobacco smoke in the air at work may be entitled to financial recovery under worker's compensation, unemployment and/or disability coverage and may be entitled to the special protections accorded "handicapped" individuals.

Lawsuits attempting to establish the right to a smoke-free work environment have been on the rise since December, 1976 when, in a case involving New Jersey Bell Telephone, the New Jersey courts held that an employee who had developed a severe allergy to tobacco smoke had a common law right to work in a smoke-free environment. 84/ The court held that New Jersey Bell had an obligation to provide employees with safe working conditions by restricting employee smoking to the lunchroom and lounge. The New Jersey court noted the irony that New Jersey Bell had long restricted smoking in places where it kept its computers but not where it affected nonsmoking employees. In a similar case in Missouri in 1982 involving Western Electric, the court agreed with the decision in New Jersey and held that an employee has a common law right to work in an environment where smoke does not jeopardize his health. 85/

In only one major case has an employee failed in a suit seeking to require an employer to institute restrictions on smoking based upon an assertion of the common law right to a work environment reasonably free from tobacco smoke. The suit was rejected on factual rather than legal grounds, based upon the limited scientific evidence presented to that particular court. In that 1983 case, the employee claimed that he had been personally injured by tobacco smoke in the air. However, because of the limited evidence presented, the Court held that without scientific evidence of harm to nonsmokers in general, an employee had no claim to a work environment reasonably free from tobacco smoke under the common law/safe workplace standard and dismissed the lawsuit. 86/ Had the plaintiff in this case been able to present the findings of the two Reports, it is possible that a different decision might have been reached. In any case, the Reports are likely to play a significant role in future cases and may strengthen efforts by injured employees.

The findings of the Reports also make it more likely that employers who fail to protect nonsmokers will face an increase in the other types of legal claims which employees may assert. For example, nonsmokers who have been able to document that

the smoke of their coworkers makes it impossible for them to carry out their duties without risking serious injury, have been declared "handicapped persons" by the courts within the terms of the Federal Rehabilitation Act of 1973. 87/ By law, employers may not discriminate against the handicapped and must make reasonable accomodations to their needs. Thus, employers must make reasonable accomodations for nonsmokers unable to work as the result of environmental tobacco smoke.

A number of nonsmokers also have argued that smoke in the workplace has caused them to become ill and/or disabled and, therefore, that they are entitled to disability compensation. The most famous case involves a long-time federal employee who applied for and was awarded disability benefits when she experienced severe pulmonary problems from the smoking of others in her workplace. The court concluded that because the employer was unable or unwilling to provide this particular employee with a smoke-free worksite, her disease did prevent her from returning to work and she was entitled to disability compensation. 88/ In other cases employees who have proved that they resigned because of the health affects of involuntary smoking have been found to be entitled to unemployment compensation based upon medical evidence of their injury and its cause. 89/ Still other courts have held that employees who can prove that they have been injured as a result of smoking in the workplace are entitled to worker's compensation. 90/

A recent case from the State of Washington approaches the issue differently. This case may present an even greater financial threat to employers. 91/ In this case, a former state employee alleged she contracted chronic obstructive lung disease because her employer negligently required her to work in an office environment in which she was regularly exposed to tobacco smoke. Initially, she sought worker's compensation benefits, but was turned down because the applicable state board held that her injury did not constitute an occupational disease within the terms of the statute. The Board held that the disease was not one which was commonly regarded as natural to, peculiar to or

brought about by conditions in her occupation. The Board also held that a disease does not become an occupational disease just because it is contracted on the employer's premises or results from the employer's actions. However, having found that the plaintiff was not entitled to worker's compensation, the Washington Court of Appeals then held that she was not, therefore, bound by the preemptive provisions of the state worker's compensation system prohibiting employees from otherwise suing their employers for damages. The court permitted her to sue her employers under a traditional common law tort theory for damages arising out of the personal injuries which she claimed she suffered as the result of her employer's negligence. The court added that if the plaintiff is able to prove that her employer was negligent and that the disease she contracted was the result of that negligence, her employer would be directly liable. This case points out the difficult position in which employers who fail to act could find themselves. If the state board finds an involuntary smoking injury to be work related, the employee will be entitled to worker's compensation. If not, the employee may be able to sue the employer directly for damages.

Up to now, all of the cases which have been brought by nonsmokers have involved individuals who already have suffered serious injury. Cases in a related area — asbestos — may portend a different approach. A number of workers who have been exposed to asbestos have sued before they contracted lung cancer on two theories. First, they have aruged that they are entitled to damages because their "exposure" to asbestos creates an increased risk or an increased probability of contracting cancer in the future. Second, they have argued that they are entitled to damages for the mental distress and anguish they have suffered as the result of their knowledge that they have an increased risk of disease. 92/ The results have been mixed. Three cases illustrate the spectrum of the judicial reactions to these approaches and demonstrate that the ultimate merit of this approach may vary from state to state.

In one case interpreting the law of Texas, 93/ the U.S. Court of Appeals for the Fifth Circuit held that a plaintiff in an action against an asbestos concern could recover damages for a disease from which he was not yet suffering if he introduces expert testimony establishing that there is a reasonable medical probability that the disease will appear in the future, i.e., that it is more likely to occur than not. If the employee meets that standard the court held he would be entitled to recover all damages associated with that disease even if he was not yet ill. The Court added that the still healthy employee could recover for the mental anguish he suffered even if he could not prove that there was a reasonable medical probability he would contract the disease if his fear was real, reasonable and involved a disease of substantial concern.

In contrast, a case decided by the United States Court of Appeals for the Third Circuit interpreting the Federal Employment Liability Act 94/ held that an employee exposed to a hazardous substance may not sue until the injury which results from the exposure manifests itself. The most recent decision 95/ on this subject is from Mississippi and reaches a conclusion which falls between the other two. In that case the plaintiff was already suffering from asbestosis, but did not at that time have cancer. The Court held that under Mississippi law a plaintiff is entitled to recover for the future consequences of his exposure to a hazardous substance if he can prove that a reasonable probability of future disease exists once at least one evil effect of the exposure occurs. The Court also found that the plaintiff's fear of contracting lung cancer involved a present injury and not just a future injury and held that under Mississippi law, the plaintiff could recover for mental distress arising out of his fear of contracting lung cancer if the mental distress was accompanied by a physical injury, i.e., asbestosis, or if the defendant's conduct was wilfull, gross or wanton.

It is too early to determine whether a nonsmoker will successfully sue claiming that his exposure to environmental tobacco smoke increases his risk of lung cancer and has caused him serious mental distress. The available data make it unlikely that a

typical nonsmoker will be able to prove that it is more likely than not that he will contract lung cancer as the result of a particular party's actions which exposed him to environmental tobacco smoke. However, as the scientific data on the health effects of involuntary smoking mount and as the law continues to develop in this area, these legal theories will in all probability be the subject of significant discussion.

In sum, courts have been willing to intervene to protect nonsmokers in the workplace where the scientific evidence has been adequate. The scientific findings of the Reports are likely to prompt more suits by employees seeking to protect their rights through the use of the court system and are likely to make employers who fail to act to protect nonsmoking employees more vulnerable to judicial intervention, and, potentially, substantial financial liability.

Policy Options

Given the legislative and regulatory activity and the judicial involvement which preceded the issuance of the Reports, it is likely that both the public and private sectors will play an important role in the development of the workplace response. To the extent that the response is governmental, the question to be addressed is twofold: at what level of government are the most effective options for protecting individuals in the workplace likely to be developed, and what should the government's response be in its role as an employer as well as a regulator?

The governmental response to the Reports is important for three reasons. The first is that government is one of this nation's largest employers. The Bureau of Labor Statistics of the U.S. Department of Labor reports that as of 1984, approximately 16 million Americans worked for the government at one level or another. 96/ Second, the protection of workers against unnecessary hazards in the workplace has long been considered an essential responsibility of government in terms of setting standards and enforcing compliance. Third, while it is never easy to identify the motivations for the initiation of a specific private sector workplace policy, the government can and often

does act as a catalyst for voluntary action both by its own behavior and by its establishment of standards. 97/

State and local governmental agencies rather than the federal government have taken the lead in protecting nonsmokers in the workplace. Nonetheless, 33 different states currently do not have legislation regulating smoking in the workplace and 40 states do not have legislation specifically regulating smoking in private sector workplaces. 98/ Fewer than one in five workers lives in a state with legislation protecting nonsmokers in private sector workplaces. 99/

In addition, many of the existing statutes which provide some protection for nonsmokers in the workplace exempt large numbers of employers or permit employers to circumvent the anticipated protections. For example, Wisconsin's Clean Indoor Air Act 100/ is cited as one of the statutes which protects workers. On its face, the Act seems to apply to most Wisconsin firms, most places where people work in Wisconsin or most workers. However, the Act exempts offices that are privately owned and occupied and any area of a facility used principally to manufacture or assemble goods, products, or merchandise for sale. Another section of the Act exempts areas which an employer designates as smoking areas, including entire rooms and buildings which a person in charge so designates by posting appropriate notices. 101/ In short, Wisconsin's Clean Indoor Air Act does not appear to apply to the majority of the state's companies, workplaces or employees, and even if it did, firms are permitted to exempt themselves from the law by designating all of their facilities as smoking areas. The Wisconsin example demonstrates that in some states with statutes regulating smoking in the workplace as in those states with no regulations or legislation, the government currently provides little protection to workers against the risks of involuntary smoking. Even in those states with more stringent protections for nonsmokers, the current protections were developed without the benefit of the Surgeon General's finding that the simple

separation of smokers and nonsmokers in the same airspace does not provide adequate protection.

In light of the substantial gaps in protection from involuntary smoking in the workplace it would appear that a major legislative effort may be needed to improve governmentally mandated protections for nonsmokers. State occupational safety and health agencies also have a potentially significant role to play whether or not OSHA acts.

The role of the federal government also must be carefully examined. There is a strong argument to be made that given the current scientific evidence, environmental tobacco smoke is within OSHA's authority to promulgate standards. Action by OSHA has several benefits and several potential drawbacks. OSHA could promulgate a standard which could protect virtually all workers in the United States. However, it often takes OSHA a substantial period of time to promulgate a new standard. The Surgeon General has concluded that more than sufficient scientific evidence exists now to take steps to protect workers against environmental tobacco smoke. A decision by OSHA to begin the process of promulgating a standard might prompt others to delay the implementation of protections for nonsmokers in the workplace while the standard is under development.

The quickest, and in the short run, the most effective response to the Reports may come from employers who are concerned about the health and safety of their workers who also desire to avoid governmental regulation and legal liability. An issue of relevance to these private sector employers is their legal authority to voluntarily restrict smoking within their workplace and/or give preferential treatment to nonsmokers to minimize the problems of involuntary smoking without risking suit by smokers. It appears that employers have wide latitude to restrict smoking in the workplace and in most instances may be able to legally give preferential treatment to nonsmokers. 102/

Despite the recent attention, regulation of smoking at work is not a new concept. There has been a long, non-controversial tradition of restricting smoking in the workplace to ensure the safety of workers, equipment and products. 103/ For years

smoking has been restricted to prevent fires or explosions around flammable materials, to prevent the contamination of products or to prevent harming sensitive equipment.

Over the past decade an increasing number of employers have imposed restrictions on smoking in the workplace and a few, including a number of municipal and county governments and corporations, have enacted policies against hiring smokers. 104/ Significantly, none of these actions has ever been successfully challenged in the courts by a smoker. The reason is that the law does not recognize smoking as a legally protected right, the right to smoke. Smokers have rights, the same rights as other employees, but one of those rights is not the right to smoke whenever and wherever the employee desires. The law provides that employers cannot discriminate based upon race, religion, national origin, in some cases sex, and in some places marital status. The law also says that employers must make reasonable accomodations for the disabled and handicapped. Beyond these restrictions, private sector employers have substantial freedom in who they hire and even greater freedom in deciding whether and where they permit employees to smoke while at work. Some have argued that these restrictions discriminate against smokers. Others have contended that smokers are physiologically addicted to cigarettes and, therefore, qualify as handicapped persons. Neither argument has succeeded, 105/ nor do they appear likely to succeed.

At the same time, the role of labor unions should be recognized. As indicated by the testimony of the American Federation of Government Employees before the House Subcommittee on Health and the Environment of the House Energy and Commerce Committee in 1986, when union leadership is brought into the decision making process they can and often are willing to play a vital role in the successful implementation of smoking policies. For those private sector employers with labor union contracts, attention must be given to the terms of those contracts before restrictions on smoking in the workplace are implemented. There is a debate in the legal community as to whether a private sector employer who wishes to protect nonsmokers in the workplace must put a

new smoking policy up for collective bargaining. The issue revolves around whether a new smoking control policy represents a change in the conditions of employment or whether it represents the right of an employer to adjust the workplace environment to prevent any employee from being subjected to an unnecessary health hazard. The outcome of this debate may vary from state to state, although a 1986 decision involving employees of the State of Maine indicates that in certain circumstances even an employer with a labor contract may have substantial flexibility in instituting a policy to protect nonsmokers. Whatever the outcome of that legal debate, the law provides that the employer who has bargained in good faith - even if no agreement is reached - can as a general rule proceed to introduce a smoking control policy without being guilty of an unfair labor practice. The better policy and the one more likely to lead to the successful implementation of a smoking control policy is for labor and management to work together to develop a policy satisfactory to both.

The trend towards voluntary action is likely to be enhanced by the Reports if employers are provided with sufficient information about their content. Educational efforts targeted toward private sector employers are an important component in any overall program designed to protect workers.

In conclusion, protecting workers against the hazards posed by involuntary smoking needs to be a joint effort of the private and the public sectors. While voluntary action by the private sector is likely to play an essential role, inevitably it will leave gaps in protection for those employees who work for companies without adequate protections.

CONCLUSION

The reports of the Surgeon General and the National Research Council are carefully prepared and well documented scientific analyses which evaluate and summarize the available scientific evidence about the health effects of involuntary smoking. They are consistent in their conclusion that involuntary smoking is a proven serious hazard to the health of nonsmokers. These findings have major public health policy implications effecting every American, every level of government and the private sector. The finding that smokers jeopardize the health of those who do not smoke raises fundamental questions about how our society addresses issues of health and safety and refocuses the debate from a discussion of common courtesy or freedom of choice. It also alters the legal responsibility of those in a position to protect nonsmokers.

The public health issues posed by the Reports cannot be addressed by either the private sector or the public sector alone, by any single governmental agency or level of government or by any single strategy. These findings have different implications in different settings: the most effective means available for protecting children and other nonsmokers in the home is public education; protections for nonsmokers in public places are likely to depend more on the actions of state and local legislative bodies; protections for nonsmokers aboard commercial aircraft will depend upon the initiative of the federal government and the possible intervention of the judiciary; protections for employees in the workplace will come from the courts, administrative agencies, legislative bodies, and private employers.

The finding that the simple separation of smokers and nonsmokers in the same airspace does not fully protect nonsmokers and the finding that scientists have been unable to identify a threshhold level of exposure to tobacco smoke without risk call into question the assumptions and compromises on which many current policies are based.

Ultimately, whether the scientific findings in the Reports become the basis for sound policy initiatives depends in large part upon the extent of efforts to disseminate

them as widely as possible. If this can be done well, the tools exist to protect nonsmokers from the health hazards of involuntary smoking.

FOOTNOTES

Part I

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3. Id., p. 214.

4. Id., p. 47.

5. Id., p. 231.

6. Id., p. 231.

7. Barbara Hulka, Chairman, Committee on Passive Smoking of the National Research Council, November 14, 1986 (press conference), response to press questions.

8. J.J. Repace, and A.H. Lowery, "A Quantitative Assessment of Nonsmokers' Lung Cancer risk from Passive Smoking", Environmental International, Vol. II, 1985, p. 12.

9. Barbara Hulka, Chairman, Committee on Passive Smoking of the National Research Council, "Opening Statement", November 14, 1986 (press conference).

10. U.S. Department of Health and Human Services, The Health Consequences of Involuntary Smoking: A Report of the Surgeon General, Washington, D.C., 1986, p. x.

11. Environmental Tobacco Smoke, p. 188; The Health Consequences of Involuntary Smoking, p. 37.

12. Environmental Tobacco Smoke, p. 217.

13. Id., p. 216.

14. Id., p. 217.

15. Id., p. 271.

16. Id., p. 272.

17. Id., p. 269-70.

18. Id., p. 216; The Health Consequences of Involuntary Smoking, p. xi.

19. Environmental Tobacco Smoke, p. 176.

20. Id., p. 173-75.

21. Id., p. 214.

22. Id., p. 176.

23. Id., p. 178.

Part II

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31. Id., p. 283.

32. Dooley, 1 Modern Tort Law, Ch. 3 (1982); see D.C. v. Cassidy, 465 A.2d 395 (D.C. App. 1983); Ballard v. Polly, 387 F.Supp. 895 (D.C. Cir. 1975).

33. Restatement (2d) Torts, §281 (1965); Prosser, Law of Torts, Ch. 5 (4th Ed. 1971).

34. The Health Consequences of Involuntary Smoking, p. 263.

35. Second Restatement of Torts, §332; see, Seganish v. D.C. Safeway Stores, Inc., 406 F.2d 653 (D.C. Cir. 1968); Foy v. Friedman, 280 F.2d 724 (D.C. Cir. 1960); Martin v. Amusements of America, Inc., 38 N.C. App. 130, 247 S.E. 2d 639 (1978).

36. Second Restatement of Torts, §332, 341A, 343, 347; Prosser, The Law of Torts, 4th Ed. (1971) at §61.

37. The Health Consequences of Involuntary Smoking, p. 266.

38. Id., p. 275.

39. Id., p. 266.

40. Id., P. 265.

41. Peter Hanauer, et al., Legislative Approaches to a Smoke Free Society, American Nonsmokers Rights Foundation, Berkeley, California, 1986, p. 84.

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60. Id., p. 6.

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65. Id., p. 142.

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