



FIGURE 3.—Average restrictiveness of State laws in effect, 1960–1985

NOTE: Coding of restrictiveness of law; Extensive = 1.00; Moderate = 0.75; Basic = 0.50; Nominal = 0.25. (See appendix for definitions of restrictiveness of laws.)

SOURCE: ASH (1986); OTA (1986); Tri-Agency Tobacco Free Project (1986); US DHHS (1985b).

States. Compared with other States, major tobacco States are less likely to have enacted smoking legislation and more likely to have enacted less stringent laws.

TABLE 3.—Regional variation in State laws restricting smoking

Region	Total States	States with laws ¹		Average effective date of first law	Average restrictiveness of laws in effect in 1985 ^{2,3}
	N	N	(%)		
Northeast	11	11	(100)	1944	.614
North Central	12	9	(75)	1976	.694
West	15	14	(93)	1968	.714
South	12	7	(58)	1955	.357
Major tobacco-producing States ⁴	6	3	(50)	1961	.250
Other southern States	6	4	(67)	1951	.438

¹ Differences in prevalence of laws among four regions: chi square; (3 df) = 8.67, p = 0.03; difference in prevalence of laws, South vs. all others: chi square (1 df) = 5.99, p = 0.04.

² Includes only States with laws in effect (see Table 1 for Index of Restrictiveness).

³ Difference in restrictiveness, South vs. all others: t = 2.76, p = 0.03.

⁴ North Carolina, South Carolina, Virginia, Kentucky, Tennessee, Georgia.

Local Legislation

In the 1980s, the momentum of nonsmokers' rights legislation spread from the State to the local level, spearheaded by actions in California (Warner et al. 1986). Although not the first local action, the successful passage of San Francisco's Proposition P in 1983 in spite of heavily subsidized tobacco industry opposition attracted widespread publicity and was followed by the passage of comprehensive legislation in a number of other local communities (Doyle 1984).

Many local ordinances extend existing State policies to restaurants and worksites. According to a March 1986 survey, 74 California cities and counties have passed smoking ordinances, including 62 requiring no-smoking sections in restaurants and 54 restricting smoking in retail stores (Americans for Nonsmokers' Rights Foundation 1986). In the survey, 66 of these cities and counties require private employers to have a smoking policy or to identify no-smoking areas. As a result, 44 percent of California's population lives in communities that have enacted workplace smoking ordinances even though California has no State legislation covering the private workplace.

According to the Tobacco Institute, by the end of 1985, 89 cities and counties nationwide had restricted smoking in the private workplace. As stated above, three-fourths of these were in California (BNA 1986). Workplace smoking ordinances have also been passed in Cincinnati (Ohio), Kansas City (Missouri), Tucson (Arizona), Aspen

(Colorado), San Antonio, Austin, and Fort Worth (Texas), Newton (Massachusetts), and Suffolk County (New York). In New York City, a bill to prohibit smoking in all enclosed public places has been proposed by the mayor (New York Times 7/6/86).

Regulatory Approaches

Administrative agencies have become involved in smoking regulation in two ways: (1) the enforcement of smoking legislation enacted by State and local government is commonly delegated to a specific agency, usually the public health department; or (2) an agency may initiate smoking regulation as part of the activities it has been authorized to supervise (Feldman et al. 1978). Agency regulations have been the major mode of regulation at the Federal level, where smoking by Government employees and by passengers in interstate transportation vehicles have been addressed. Smoking by State and local employees has also been addressed by the actions of administrators; e.g., smoking by municipal employees and in public areas of municipal buildings was banned by a recent mayoral order in New York City (New York Times 6/26/86).

Smoking Regulation in Specific Public Places

Public Transportation

Because high concentrations of environmental tobacco smoke can accumulate inside public transport vehicles, smoking is often restricted or banned in public transportation. Smoking is likely to be banned entirely in vehicles where smokers spend relatively little time (e.g., city buses), and confined to designated areas in situations where smokers spend several hours (e.g., intercity buses, trains, and airplanes). Such restrictions are relatively well accepted.

Smoking on interstate transportation vehicles is regulated by Federal agencies. The Civil Aeronautics Board, under its jurisdiction to "ensure safe and adequate service, equipment, and facilities," initially regulated smoking on airplanes, requiring, since 1972, that every commercial air flight provide a no-smoking section for all passengers requesting such seating (Feldman et al. 1978; Walsh and Gordon 1986). Airline control is currently part of the authority of the U.S. Department of Transportation. Likewise, the Interstate Commerce Commission has restricted smoking on buses and trains to designated areas since the early 1970s (Feldman et al. 1978; Walsh 1984).

Additionally, States and local governments have regulated smoking in public transportation vehicles. Thirty-one States have enacted legislation to restrict smoking to designated areas in public transit vehicles; an additional four (Florida, Georgia, Massachusetts, and

Washington) ban smoking entirely on these vehicles (Table 2). Local ordinances also frequently address public transportation.

Retail Stores

In general, State and local legislation prohibiting smoking in retail stores is well accepted. Eighteen States currently prohibit smoking in retail stores (Table 2). Proprietors and their trade associations have generally supported smoking restrictions out of concern for the costs of cigarette burns to merchandise and facilities and for the image presented to customers by employees. Furthermore, their business is less likely to be affected than, for instance, the restaurant trade because smoking is not as closely associated with shopping as it is with eating and drinking.

Restaurants

The average American, who according to National Restaurant Association (NRA) statistics eats out 3.7 times per week, has the potential for repeated environmental tobacco smoke (ETS) exposure (NRA 1986). This is a problem particularly in small restaurants, where ventilation may not be able to remove smoke and room size precludes a meaningful separation of smokers and nonsmokers. Public opinion polls document support for restaurant smoking restrictions among nonsmokers *and* smokers. Ninety-one percent of nonsmokers and 86 percent of smokers responding to a 1983 Gallup poll favored either restricting or banning restaurant smoking, with most preferring restriction (Gallup 1983). Similar results were reported by two regional polls in 1984 (UC SRC 1984, Hollander-Cohen Associates 1984). Roper polls in 1976 and 1978 demonstrated the growth in this sentiment during the mid-seventies; the proportion of respondents supporting restrictions grew from 57 percent to 73 percent in 2 years (Roper 1978). Yet little is known about how restrictions affect decisions to dine out or the choice of restaurant. A 1981 telephone survey of 949 individuals conducted by the NRA (1982) found that the existence of a no-smoking section was near the bottom of a list of 13 attributes influencing an individual's choice of restaurant. On the other hand, 47 percent of 1,038 adults answering a 1984 Gallup Monthly Report on Eating Out stated that one reason they did not eat out more was that they were bothered by smoke (Gallup 1984).

As in other privately owned facilities, smoking regulations in restaurants have come about through private initiative *and* public mandate. Private initiatives have sometimes occurred in anticipation of a local ordinance, but the number of restaurants that have voluntarily established no-smoking sections is not known. The

Ontario Restaurant and Food Services Association (1985) published a handbook of guidelines for establishing no-smoking sections.

In 1974, Connecticut became the first State to require restaurants to have no-smoking sections. By 1980, eight other States also regulated restaurant smoking. At present, laws in 18 States and an unknown number of localities regulate smoking in restaurants. Although a nationwide accounting of local regulations is not available, data are available for several States (Table 2). Most State and local ordinances specify (1) the minimum number of seats that must be included in a no-smoking section, (2) the smallest restaurant for which rules apply, and (3) the manner in which customers are to be informed about no-smoking sections. Bars that do not serve meals are uniformly excluded from restrictions. Most current State legislation specifies that a minimum of 30 percent of seats be designated as no-smoking and exempts facilities with fewer than 50 seats. Local ordinances are generally more restrictive, specifying that a higher percentage of seats be designated no-smoking and extending coverage to smaller establishments. Model ordinances (Hanauer et al. 1986) suggest that a minimum of 50 percent of seats be designated as no-smoking, require the posting of signs inside and outside the facility, and specify that owners ask patrons about smoking preference rather than respond only to customer requests.

There has been more opposition to smoking restrictions in restaurants than in other privately owned public places (Hanauer et al. 1986). Opposition has come primarily from restaurant associations and centers on three concerns: (1) government intrusion into business practice, (2) practical problems in coordinating seating of smokers and nonsmokers, and (3) losing the business of smokers who chose to leave a facility rather than to dine in a no-smoking section or wait for an available table in a smoking section. These concerns assume that the supply of no-smoking tables will exceed demand. While the proportion of tables allocated by most laws to no-smoking sections greatly underrepresents the proportion of nonsmokers, mixed parties of smokers and nonsmokers would have to decide which section to sit in. Restaurant owners appear to perceive little customer demand for no-smoking areas, or are unaware of the very high percentage of smokers and nonsmokers responding to public opinion polls who support smoking restrictions.

In anecdotal reports, the experience of restaurant owners who have implemented restrictions is that they are well accepted by customers and less difficult to implement than expected (Lehman 1984). There is little information on the extent of restaurant compliance with State and local laws. In Park City, Utah, the Chamber of Commerce polled its 32 member restaurants, and only 25 percent had complied with State law to set up no-smoking areas (Park Record 6/13/85). However, a random survey of Minneapolis

restaurants in 1976, 1 year after enactment of the comprehensive Minnesota Clean Indoor Air Act, found near-total compliance with the State's smoking regulations (Sandell 1984). In a 1978 Minnesota survey, 66 percent of nonsmokers and 81 percent of smokers felt that there were adequate no-smoking areas in that State's restaurants (Minneapolis Tribune 1978).

Hotels and Motels

Over the past decade, hotel and motel operators have begun to offer guest rooms in which smoking is prohibited. In some facilities, no-smoking areas in lobbies and restaurants are also provided. Hotels are unique among public places in the manner and ease with which smoking has been addressed. Unlike the situation in restaurants, among hotels the no-smoking room policy is uniformly a private initiative, introduced by management in response to perceived customer demand (Linnell 1986). Hotel and motel rooms are not covered by State and local regulations and have not been addressed by nonsmokers' rights advocates.

Designating guestrooms as no-smoking began in the early 1970s in smaller hotel and motel chains. In the 1980s, the concept has spread to larger chains, including Hyatt Hotels in 1984 and Hilton Hotels in 1986 (Los Angeles Times 1986). According to a 1985 survey of 98 hotel and motel chains, 37 of 41 respondents provided no-smoking rooms, 23 by chainwide policy. The four respondents who did not offer no-smoking rooms were considering doing so (Linnell 1986). The percentage of rooms allocated as no-smoking varied from 5 to 30 percent, far less than the prevalence of nonsmokers in the adult population (70 percent). As a result, demand often exceeds supply, leading several chains to increase the percentage of no-smoking rooms (Linnell 1986; Vettel 1986). The only entirely no-smoking facility is the Non-Smokers Inn, a 134-room motel in Dallas, Texas, which has been open since 1982 and reports a 96 percent occupancy rate (Vettel 1986). Although there are anecdotal reports of problems with compliance, hotels do not have penalties for violators. The exception is the Non-Smokers Inn, where at check-in guests sign an agreement to abide by the rule; if the management detects smoking by occupants, \$250 is charged to cover the costs of cleaning.

Whether no-smoking guestrooms offer significant protection from sidestream smoke exposure is not clear. It is not known whether nonsmokers are exposed to significant quantities of ETS by staying in hotel rooms previously, but not currently, occupied by smokers. Rooms designated as no-smoking may primarily allow nonsmokers to avoid stale tobacco odors.

The regulation of smoking in hotels and motels is supported by public opinion. Fifty to sixty percent of respondents to recent opinion polls favor restrictions on smoking in hotel rooms, and an additional

7 to 18 percent favor outright bans on smoking (Gallup 1983, UC SRC 1984, Hollander-Cohen Associates 1984). In the 1983 Gallup poll, 60 percent of nonsmokers and 49 percent of smokers supported smoking restrictions in hotels, with an additional 15 percent of smokers and 7 percent of nonsmokers favoring outright smoking bans.

Hotel management regards such policy as a marketing tool. Cost savings do not appear to be a motivating force in the trend, in spite of anecdotal reports of reduced cleaning and maintenance costs in no-smoking rooms (Linnell 1986). Preparing no-smoking rooms requires an up-front cost for the thorough cleaning of furnishings and often the repainting of walls. For instance, Quality Inns estimated that it spent \$138 per room when it allocated 10 percent of its rooms as no-smoking in 1984 (Vettel 1986).

Schools

Smoking by students in schools has been the subject of State legislation, State and local school board regulations, and individual school policies. Colleges and universities are not discussed in this section. In 27 States, schools are among the public places where smoking is restricted to designated areas (Table 2). School board policies often combine restrictions on tobacco use in schools with educational programs about the hazards of tobacco use. Smoking by teachers, for whom school is the workplace, is also regulated by many school boards.

Smoking has traditionally been regulated in schools for reasons other than concern about sidestream smoke exposure. The two rationales have been to comply with State law and to prevent the initiation of smoking by adolescents. The sale or use of tobacco by minors is prohibited in 35 States (Breslow 1982). Many of these laws are rendered ineffective by the availability of cigarettes in vending machines and by cultural norms that discourage the laws' enforcement (US DHEW 1969). Nonetheless, the laws do provide a legal incentive for schools to regulate student smoking. The second reason for restricting smoking in schools is that adolescents are making decisions about whether to begin smoking and the influence of peers as well as of adult role models who smoke is recognized to be important (US DHHS 1980, 1982).

Recognition of the health effects of involuntary smoking provides an additional reason to address smoking in schools and a reason to expand attention from students to faculty. For teachers and staff, the school is the worksite, a location with the potential for substantial ETS exposure (Repace and Lowrey 1985). For students, school is the site where they spend the most time outside of the home.

A total prohibition of smoking on school grounds provides the greatest protection from sidestream smoke exposure and unwanted role modeling effects. In practice, however, this policy has often proved difficult to enforce effectively (Rashak et al. 1986). In some cases it has created major discipline problems and required substantial time and personnel for enforcement. School officials, faced with the management of other social problems, may not wish to devote much of their resources to enforcement of a strict smoking ban. Consequently, many schools have established student smoking areas inside or outside the school building. Use of these areas often requires parental permission. Smoking areas for students are not popular with parents or teachers, according to survey data. Over three-fourths of 603 adults responding to a 1977 Minnesota poll opposed allowing school boards to establish smoking areas for students. Only 13 percent of 1,577 public school teachers responding to a 1976 nationwide survey thought students should be able to smoke on school grounds.

The nature and extent of school smoking policies nationwide is not known. Results of the few statewide surveys vary considerably. A Connecticut survey reported that 75 percent of the State's public high schools permitted smoking (Bailey 1983). In contrast, in Arizona, where State law requires schools to restrict smoking on school grounds, 92 percent of the State's 169 public and private secondary schools surveyed had written smoking policies for students, and most policies prohibited all tobacco use by students (Rashak et al. 1986).

Smoking by teachers at schools is generally prohibited in the classroom, but is often permitted in a lounge where students are not allowed. Ninety percent of Arizona schools permit smoking in teachers' lounges, 40 percent in private offices, and 19 percent in meetings (Rashak et al. 1986). Such policies attempt to avoid negative role modeling effects; however, they create a double standard that may be a barrier to student compliance with smoking bans. There has been little concern for protecting teachers from involuntary smoke exposure at the worksite. Since smoking is prohibited in the classroom, their exposure is limited to offices and lounges.

Health Care Facilities

There are strong reasons for health care facilities to have particularly stringent restrictions on smoking. Many patients treated in these facilities suffer from illnesses whose symptoms can be worsened by acute exposure to tobacco smoke. Hospitals also convey messages about health to patients and visitors; permitting smoking on the premises may undermine the messages delivered to many patients about the importance of not smoking (Kottke et al. 1986).

Stringent restrictions on smoking in hospitals have been endorsed by the American Academy of Pediatrics (1986), the American Medical Association (1984), and the American College of Physicians (1986). Hospital smoking policies have been opposed by some who are concerned about inconveniencing smokers at times of illness and stress. Proponents of hospital no-smoking policies, on the other hand, are concerned about inconveniencing the *nonsmoking* patient or visitor at these stressful times.

Public opinion supports smoking restrictions in health care facilities. In the 1978 Roper survey, 69 percent of respondents favored a ban on smoking in doctors' and dentists' offices and waiting rooms (AMA 1984). Of the more than 3,000 individuals interviewed in hospitals and restaurants, 66 percent favored restricting or banning smoking in these areas (Barr and Lambert 1982). Over 80 percent of patients and faculty and 68 percent of employees agreed that "a smoke-free hospital would be an improvement in patient care" at the University of Minnesota hospital (Kottke et al. 1986).

Smoking in health care facilities has been addressed through State and local legislation, Federal regulation, and private initiative. In most States, hospitals and nursing homes are included among public places where smoking is restricted to designated areas (Table 2). In many cases, these legislative efforts have not led to strong protection of patients from involuntary smoke exposure because patient care areas may be included among the designated areas where smoking is permitted. Federally run hospitals have adopted increasingly stringent restrictions on smoking. For instance, Veterans' Administration hospitals and clinics adopted a new smoking policy in 1986, and a large number of Indian Health Service hospitals are now entirely smoke free (OTA 1986; Rhoades and Fairbanks 1985). Health care facilities run by some States, such as Massachusetts, have also adopted no-smoking policies (Naimark 1986). In nongovernment hospitals, most smoking restriction has been the result of private initiative, often spearheaded by the medical staff. Much of this action has taken place in the 1980s.

Hospital smoking policies can be complex. Within a single institution, smoking may be handled differently in inpatient, outpatient, and administrative areas. Patients, visitors, and employees may be subject to different sets of restrictions. Consequently, smoking policies vary widely among hospitals (Ernster and Wilner 1985). The least stringent policy prohibits smoking only where it is a safety hazard, such as near oxygen, and may permit the sale of cigarettes on the premises. Mild policies often assign patients to beds by smoking status, prohibit staff from smoking in patient care areas, and provide areas in cafeterias and waiting rooms for nonsmokers. Moderately stringent policies prohibit smoking in shared patient

rooms or in all patient rooms. Some hospitals permit patients to smoke with a doctor's written order. The most stringent policies, the so-called smoke-free hospitals, prohibit smoking throughout the facility or limit smoking to a single room away from patient care areas (Kottke et al. 1986). Enforcement of a smoking policy is usually the responsibility of the nursing staff. Guidelines for implementing hospital smoking policies have been formulated (Kottke et al. 1986; Ernster and Wilner 1985; AHA 1982).

In spite of anecdotal reports of the adoption of stringent smoking policies in individual hospitals (Andrews 1983), survey data indicate that smoking is still widely permitted in patient care areas. A survey of 360 randomly selected U.S. hospitals published in 1979 found few restrictions on smoking; fewer than half elicited the patients' smoking preference on admission or had no-smoking areas in cafeterias, waiting rooms, or lobbies, and smoking was permitted on 76 percent of the wards (Kelly and Cohen 1979). A 1981 survey of 1,168 community hospitals (Jones 1981) documented some change in policy prevalence. More than 90 percent of the hospitals had a written smoking policy, which restricted smoking to designated areas in 97 percent of cases. Over 85 percent of the hospitals offered no-smoking patient rooms, subject to availability (Jones 1981). A recent survey of 185 hospital administrators in Georgia reported that 70 percent continue to allow smoking in patient rooms, although only 6 percent permit it at nurses' stations (Berman et al. 1985). The proportion of hospitals allowing cigarette sales on the premises has declined from 56 to 58 percent in the late seventies (Kelly and Cohen 1979; Seffrin et al. 1978) to less than 30 percent in the eighties (Ernster and Wilner 1985; Jones 1981; Berman et al. 1985; Bertelsen and Stolberg 1981). While there are little data on the prevalence of smoking policies in private physicians' offices, guidelines for physicians wanting to provide assistance in smoking cessation are well developed (Lichtenstein and Danaher 1978; Shipley and Orleans 1982; US DHHS 1984).

Current Status of Smoking Regulations in the Workplace

Policies regulating smoking at the workplace for the protection of employees' health are a trend of the 1980s. As of 1986, smoking is restricted or banned in 35 to 40 percent of private sector businesses (HRPC 1985; BNA 1986; US DHHS 1986) and in an increasing number of Federal, State, and local government offices (OTA 1986). Private sector workplace smoking is regulated by law in 9 States and over 70 communities (OTA 1986; US DHHS 1985b; ASH 1986). Actions to restrict or ban smoking at the workplace are supported by a large majority of both smokers and nonsmokers (Gallup 1985).

The workplace has become the focus of particular attention as evidence about the health hazards of involuntary smoking has accumulated. Urban adults spend more time at work than at any other location except home (Repace and Lowrey 1985). For adults living in a household where no one smokes (Hargis 1985), the workplace is the greatest source of ETS exposure. Consequently, an individual's workplace ETS exposure can be substantial in duration and intensity. This is of particular concern for individuals also exposed to industrial toxins whose effects may be synergistic with tobacco smoke (US DHHS 1985c). Furthermore, individuals have less choice about their ETS exposure at work than they do in other places, such as restaurants or auditoriums.

The nonsmoker's right to clean air on the job has been supported by common law precedent (US DHHS 1985a; Walsh and Gordon 1986). Assuring clean air at work has received the growing attention of policymakers and nonsmokers' rights advocates. The worksite has also received attention because of its naturally occurring interpersonal networks and intrinsic social norms. Behavioral scientists have attempted to take advantage of the social milieu of the workplace to increase the success of smoking cessation programs (US DHHS 1985c). Smoking policies have the potential to alter worksite norms about smoking and thereby to contribute to reductions in employee smoking rates or the prevention of smoking onset. A substantial fraction of blue-collar workers who smoke report the initiation of smoking at ages coincident with their entry into the workforce (US DHHS 1985c).

Smoking Policies

Legislation mandating smoking policies in the private sector workplace has been more controversial and less widespread than legislation covering public places. Because a worker's behavior off the job has traditionally been viewed as beyond the employer's legitimate concern, private employers have been reluctant to impose rules on behavior not directly related to employment (Walsh 1984; Fielding 1986). The concept of workplace smoking restriction has become more acceptable to employers and legislators as the hazards of involuntary smoking have become better known and as public attitudes about smoking have shifted. The rationale for policies has been reframed as guaranteeing an employee's right to a healthy work environment.

Prevalence of Smoking Policies

Notwithstanding the recent attention, regulating smoking at work is not a new idea. There is a long and noncontroversial tradition of smoking restrictions to insure the safety of the worker, workplace, and product (OTA 1986). Employers have restricted smoking to

prevent fires or explosions around flammable materials or to prevent product contamination. The policies were supported by State legislation dating back to 1892, when Vermont authorized employers to ban smoking in factories so long as a sign was posted (Warner 1982; US DHHS 1985b). New York, Nevada, and West Virginia had enacted similar legislation by 1921, and in 1924 Massachusetts banned smoking in stables because of the fire hazard (US DHHS 1985b).

Smoking restrictions remained uncommon throughout the 1960s. During the 1970s, workplace smoking regulations were included in the comprehensive clean indoor air legislation being proposed at the State level. In 1975, Minnesota became the first State to enact regulations for private worksites for the purpose of protecting employee health. Since then, eight other States have passed laws covering private sector workplace smoking (Tri-Agency Tobacco Free Project 1986; OTA 1986; ASH 1986; US DHHS 1985b). Fifteen percent of the U.S. population lives in these nine States. The scope of this legislative effort widened in the 1980s to include local government. It has been strongest in California, where ordinances in 66 communities cover 44 percent of the State's population (Americans for Nonsmokers' Rights Foundation 1986).

In spite of this legislative activity, surveys of employers through the 1970s reveal that worksite smoking regulations remained limited overall (Table 4). Those in place applied primarily to blue-collar areas and were motivated by safety concerns (NICSH 1980a,b; Bennett and Levy 1980). Policies were more common in industries with product safety concerns (food, pharmaceuticals) or explosion hazards (chemicals) (HRPC 1985). Safety was the prime reason for smoking policies in a survey of 128 large Massachusetts employers in 1978–1979. The potential for an adverse impact on clients, especially in service industries, was also cited (Bennett and Levy 1980). Concerns about the impact of smoking on the health of employees or costs to employers—the focus of the current workplace smoking action—were not mentioned. Fewer than 1 percent of 855 employers answering a nationwide survey in 1979 had calculated the costs of employee smoking (NICSH 1980a,b).

Five surveys of employers conducted between 1977 and 1980 document the situation just prior to the proliferation of workplace smoking policies. Estimates of the prevalence of smoking policies ranged from 14 to 64 percent, reflecting differences in types of businesses sampled and response rates (Table 4). A survey conducted by the National Interagency Council on Smoking and Health in 1979 had the largest sample size and the only random sample, but had a low response rate (29 percent) (NICSH 1980a). Their estimate of a 50 percent prevalence of smoking policies is probably biased upward by the likelihood that companies with policies were more likely to

TABLE 4.—Surveys of worksite smoking policies

Survey name (pub. date)	Survey year	Business surveyed			Sampling method	Interview		Response rate N (%)	Restrict smoking (%)	Worksite cessation program (%)	Incentives for nonsmoking (%)
		Number	Workforce size	Location		Method	Who?				
Dartnell's Business (1980)	1977	250	Large	U.S. and Canada	?	Office administrators	?	30	11	3	
Bennett and Levy (1980)	1978-79	128	Large (>1000)	Mass.	All Mass. business with >1000 employees	Mail	88 (66)	64	12		
National Inter- agency Council on Smoking and Health (1980)	1979	3000	Three strata of 1000: small (50-499), medium (500-2200), large (<i>Fortune</i> Double 500)	U.S.	Random sample stratified by size	Mail and phone	855 (29); same for each strata	50	15	1	
Dartnell's Business (1980)	1980	325	Large	U.S.	?	Administrative managers	?	23	9	3	
Administrative Management Society (Thomas 1980)	1980	500	?	U.S. and Canada	Nonrandom; representatives of AMS chapters	Mail	302 (60)	14			
Human Resources Policy Corp. (1985)	1984-85	1100	Large: <i>Fortune</i> 1000 and <i>Inc.</i> 's 100 fastest growing companies	U.S.	All members of two selected groups	Mail	445 (40)	32	43	8.5	

TABLE 4.—Continued

Survey name (pub. date)	Survey year	Business surveyed			Sampling method	Interview		Response rate N (%)	Restrict smoking (%)	Worksite cessation program (%)	Incentives for nonsmoking (%)
		Number	Workforce size	Location		Method	Who?				
U.S. Department of Health and Human Services (1986)	1985	1600	Two strata: small (50-99), medium-large (>100)	U.S.	Random sample stratified by size, location, and industry type	Phone		1358 (85)	38	19	
Bureau of National Affairs, Inc. (1986)	1986	1967	Predominantly small-medium 80% - < 1000	U.S.	Random sample, selected group: Am. Soc. Pers. Admin. members	Mail	Personnel executives	662 (34)	36	41	4
Petersen and Massengill (1986)	1986	1100	Predominantly small-medium: 62% - < 500; 16% - 500-1000, 22% - > 1000	U.S., Canada, and Puerto Rico	?	Mail	?	577 (53)	56	50	5

TABLE 4.—Continued

Survey name (pub. date)	Correlates of having a smoking policy				Type of smoking policy (B = ban, R = restrict)	Reason for policy	Duration of policy	Comments
	Workplace size	Location	Business type	Other				
Dartnell's Business (1980)							42% ≤ 5 years	Employees raised smoking issue in 25%
Bennett and Levy (1980)	No	No	No	No		Protect products, equipment (91%), worker safety (37%), customer contact (17%), worker health (0%)		Cigarettes sold on premises of 95%
National Inter- agency Council on Smoking and Health (1980)	Large >small (54% vs 46%)			Blue-collar > white-collar areas	Blue-collar areas 42%R/28%B, white-collar areas 15%R/11%B, cafeterias 19%R/2%B, conference rooms 6%R/7%B, medical facilities 15%R/25%B	(<1% calculate costs due to smoking	64% adopted since 1964	Management- initiated policies with rare union role; 54% with policies impose penalties

TABLE 4.—Continued

Survey name (pub. date)	Correlates of having a smoking policy				Type of smoking policy (B = ban, R = restrict)	Reason for policy	Duration of policy	Comments
	Workplace size	Location	Business type	Other				
Dartnell's Business (1980)					18% R to designated areas (usually open offices and public contact areas), 8% R in cafeterias, 5% limit smoking to breaks		69% ≤ 5 years	Employees raised smoking issue in 30%, 5% more than in 1977 survey
Administrative Management Society (1980)					Office areas 12%R/2%B B: reception areas (46%), security areas (35%), open offices (27%), hallways (16%), conference rooms (8%)			White-collar area survey only; 37% without policy had employee complaints

TABLE 4.—Continued

Survey name (pub. date)	Correlates of having a smoking policy				Type of smoking policy (B = ban, R = restrict)	Reason for policy	Duration of policy	Comments
	Workplace size	Location	Business type	Other				
Human Resources Policy Corp. (1985)		West - 45%, NE - 36%, NC - 28%, South - 22%	>50%: insurance, pharmaceuticals, finance, publishing; <20%: mining, consumer goods	Located where workplace smoking law in effect	3% B while working or on premises, 35% B by some employees, 5% do not hire smokers	Safety (25%), health (20%), comply with laws (16%), employee preference (16%) save money (3%), increase productivity (2%) Reasons reject policy: unacceptable to employees, employees settle own problem, implementation too difficult	51% ≤ 5 years	Sponsored by Tobacco Institute; management initiated policies; 70% encourage employees to settle own disputes
U.S. Depart- ment of Health and Human Services (1986)	Large >small		Services > other industry types	Not unionized or blue-collar %		Comply with rega (39%), protect nonsmokers (39%), protect equipment (14%), protect high risk employees (8%)		Data analysis still in progress

TABLE 4.—Continued

Survey name (pub. date)	Correlates of having a smoking policy				Type of smoking policy (B = ban, R = restrict)	Reason for policy	Duration of policy	Comments
	Workplace size	Location	Business type	Other				
Bureau of National Affairs, Inc. (1986)	Large >small (45% vs 33%)	West - 52%, EN - 42%, NC - 29%, South - 28%	Nonbusiness or nonmanufacturing > manufacturing	Located where workplace smoking law in effect	Open work areas 19%R/41%B; halls, conference rooms, restrooms, customer areas 56%- 66%B; cafeterias 58% partial B; total worksite 2%B; 1% hire only nonsmokers, 5% prefer nonsmokers	Comply with laws (28%), employee health, comfort (22%), employee complaints (21%), mandate by president (3%)	85% < 5 years 85%; 10% before 1982	2% to adopt policy in 1986; 21% considering policy; 23% penalties set; 32% procedures to resolve disputes
Petersen and Massengill (1986)	Only 33% of smallest (< 50 employees) have policy		Health care (93%), retailing (83%), finance (61%), manufacturing (57%), transportation (50%), service (49%), insurance (18%)	Located where workplace smoking law in effect	Designated areas only 38%, client-contact area 13%B, 1%B entirely, 2% hire only nonsmokers	Employee pressure (21%), comply with laws (19%), protect employee health (19%), reduce insurance costs (9%)	43% < 3 years, 53% < 6 years	6% made structural changes; 27% use barriers or air purifiers; 45% discipline violators

respond. An even higher prevalence of smoking policies (64 percent) reported in a survey of large Massachusetts businesses may reflect similar biases or regional variation or both. Smoking policies were reported in only 14 percent of white-collar offices in a nonrandom survey (Thomas 1980) and in 23 to 30 percent of large corporations responding to two nonrandom surveys by the same group (Petersen and Massengill 1986).

These surveys found that smoking restrictions were moderate, worksite smoking cessation programs uncommon (9 to 15 percent), and incentives for nonsmoking rare (<3 percent). Outright smoking bans and preferential employment of nonsmokers were not mentioned. However, employee complaints about smoking were reported by one-third of the businesses in two surveys (Petersen and Massengill 1986; Thomas 1980), suggesting a growing pressure on employers for change. Smoking policies were stricter for blue-collar workers and larger worksites (NICSH 1980b; Bennett and Levy 1980).

A second set of business surveys, conducted only 5 years later (1984–1986), shows a different picture (Table 4). Three large surveys, two based on random samples, reported a remarkably similar prevalence of workplace smoking restrictions, ranging from 32 to 38 percent (HRPC 1985; US DHHS 1986; BNA 1986). A fourth study reported that 56 percent of small and medium sized businesses had smoking policies, but only 38 percent of businesses restricted smoking to designated areas (Petersen and Massengill 1986).

Because of uncertainty in the earlier (1977–1980) estimates, it is difficult to conclude that the most recent estimates of policy prevalence represent an increase. However, there is suggestive evidence on this point: half or more of policies reported in the 1984–1986 surveys were adopted within 5 years, indicating that the policies are largely products of the 1980s; a sizable number of companies without policies are considering them; in addition to the 36 percent of companies reporting policies in one 1986 report, 2 percent were planning to implement a smoking policy in 1986 and another 21 percent were considering adopting a policy (BNA 1986). Finally, companies that adopt policies rarely reverse them: in the BNA 1986 survey, only 1 percent of companies without policies had ever had one and rescinded it. These data support a contention that workplace smoking policies are a growing trend.

The nature and scope of smoking restrictions also changed during the 1980s. The most common policy still restricted smoking to designated areas, but those areas appeared to be shrinking. Despite several well-publicized examples (Pacific Northwest Bell, Group Health Cooperative of Puget Sound), total workplace smoking bans were still rare (1 to 3 percent). An even more stringent smoking policy now being adopted, giving preference to nonsmokers in hiring or refusing to hire smokers, was not even considered less than a

decade before (BNA 1986; HRPC 1985; Petersen and Massengill 1986). Fewer than 5 percent of businesses have currently adopted such a policy. Workplace smoking cessation programs were more common, but incentives for nonsmoking remained rare.

The 1984–1986 surveys suggest that the diffusion of workplace smoking policies throughout the private sector is occurring in a nonuniform fashion. Companies with policies differ from those without policies in workforce size, geographic location, and type of industry. Smoking policies are slightly more prevalent in large companies than in small businesses (45 versus 33 percent) (Petersen and Massengill 1986; BNA 1986). Policies also differ by company location, being more common in the West and Northeast than in the North Central region or the South (BNA 1986; HRPC 1985). This geographic disparity is similar to the pattern of State smoking legislation, and may in part be explained by it. Businesses in States with workplace smoking laws are more likely to have adopted smoking policies than are companies located elsewhere (HRPC 1985; BNA 1986). Industries are adopting smoking policies at different rates, with more policies and more recent policies in nonmanufacturing industries (finance, insurance, health care, pharmaceuticals) (HRPC 1985; Petersen and Massengill 1986; BNA 1986). This represents a shift from the earlier blue-collar predominance of smoking restrictions and reflects the change in policy orientation from workplace safety to employee health.

Two factors may explain the growth of workplace smoking policies in the 1980s. Recently enacted State and local workplace smoking legislation is one factor influencing the private sector. Legal mandates are cited as a major reason for adopting policies, and as noted above, the prevalence of private sector smoking policies is higher in regions with legislation in place. Laws may encourage more rapid private action by putting smoking on the corporate agenda. A second factor is public support. Support for an employer's right to restrict smoking to a designated area at work grew from 52 percent to 61 percent during the 1970s (Roper 1978) and continued to increase in the 1980s (Gallup 1983, 1985). In 1985, 79 percent of U.S. adults, including 76 percent of smokers, favored restricting smoking at work to designated areas. Only 8 percent favored a total workplace smoking ban (Gallup 1985). These attitudes may also be manifest as employee pressures to restrict smoking (Petersen and Massengill 1986; BNA 1986; HRPC 1985).

Reasons for Adopting Smoking Policies

It is not always easy to identify the motivations and goals for a specific workplace policy (OTA 1986). Explicit reasons for implementing policies, according to the most recent employer surveys, are (1) to protect the health of the employee—especially the nonsmok-

er—and assure a safe working environment, (2) to comply with State and local statutes mandating worksite smoking policies, and (3) to anticipate or handle demands from nonsmoking employees for a smoke-free working environment. Other reasons may be the fear of possible legal liability for illnesses caused by sidestream smoke exposure in the workplace (Fielding 1982; Walsh 1984), an opportunity to symbolize a company's concern for employee welfare (Walsh 1984; Eriksen, in press), as part of a general health promotion and wellness program, and the goal of saving the company money.

Although it is generally agreed that employees who smoke cost their employers more than do nonsmoking employees, there is as yet little evidence that implementing policies will reduce the extra smoking-related costs (OTA 1986; Fielding 1986; Eriksen, in press). Corporations are keenly interested in stemming the rapid rise in health insurance costs, but may not see smoking policies as a means to that end. The top management at Xerox, for example, rejected a proposed smoking policy because of concerns about the potentially adverse economic impact of excess smoking breaks on productivity (Walsh 1984). Actually, economic considerations do not appear to be a major reason why businesses adopt smoking policies, according to three recent surveys (HRPC 1985; BNA 1986; Petersen and Massengill 1986).

Barriers to Adopting Smoking Policies

Both survey data and case reports give insights into reasons why employers have elected not to implement worksite smoking policies. According to a Tobacco Institute-sponsored survey, the 24 percent of large employers who had considered and rejected a smoking policy gave these reasons: policy not acceptable to employees (59 percent), employees can handle the problem on their own (58 percent), implementation too difficult (39 percent) or too costly (5 percent), policy not acceptable to clients (10 percent), and no employee complaints about smoking (29 percent) (HRPC 1985).

Fear of worker discontent or union opposition is the major reason cited by employers who have considered and rejected a workplace smoking policy. Surveys consistently indicate that smoking policies are initiated by management, and are often adopted with little or no employee or union input (HRPC 1985; BNA 1986; NIOSH 1980a,b). Although most businesses that have surveyed their employees have found strong support for smoking restrictions (Pacific Telephone 1983; Robert Finnigan Associates 1985; Addison 1984; Ziady 1986; Marvit et al. 1980), some unions have actively opposed employer-mandated policies, both in individual cases and at the national level. In 1986 the AFL-CIO Executive Council stated its opposition to unilateral policies and called for the case-by-case handling of workplace disputes between smokers and nonsmokers (BNA 1986).

Both employee organizations and employers find it difficult to simultaneously balance the wishes of all their constituents.

Another reason for reluctance to adopt smoking policies is concern about implementation (HRPC 1985). In some cases, this means concerns about how to enforce the policy (BNA 1986) or whether it is enforceable (Eriksen, in press). Other reasons cited by companies were questions about the legality of limiting employee smoking (BNA 1986) and the nonsupport of top management who are smokers (BNA 1986). Some companies are dependent on business relationships with tobacco companies and businesses with tobacco-related interests, which they do not want to jeopardize (Kristein 1984; Walsh 1984).

Types of Smoking Policies

Private sector businesses have addressed the issue of employee smoking in a variety of ways. In addition to smoking policies, the umbrella concept of "worksites smoking control" can include educational campaigns to motivate workers to quit, self-help and organized smoking treatment programs, medical advice, and incentives to encourage nonsmoking (Orleans and Shipley 1982; Windsor and Bartlett 1984). Smoking programs are sometimes subsumed as part of broader corporate wellness programs. Worksite smoking cessation programs were reviewed in the 1985 Report on the Health Consequences of Smoking (US DHHS 1985c).

Businesses have taken a variety of approaches to a worksite smoking policy. The choices reflect the individual company's motive in adopting a policy and assessment of the potential for implementation and enforcement. When protection from fire or explosion was the primary motive, policies primarily applied to blue-collar areas; when the goal was to avoid antagonizing customers, smoking bans applied only to client-contact areas (Bennett and Levy 1980). A company's solution also reflects its particular social environment. Recent study indicates considerable variability among individual worksites in attitudes and norms about smoking cessation (Sorensen et al. 1986).

Because smoke travels, the desires of smokers and nonsmokers will inevitably come into conflict in common areas, and it is difficult to simultaneously maximize the goals of smoke-free air, minimum employee disruption, and minimum cost. A business adopting a policy primarily to avoid employee conflicts is likely to pay greater heed to smokers' wishes at the expense of smoke-free air, and may consider solving the problem with increased ventilation (to avoid the necessity of behavioral change) or may separate smokers and nonsmokers. A business whose primary goal is to reduce involuntary smoking hazards will be more willing to sacrifice smokers' convenience and may consider a total smoking ban. A business that aims

to reduce costs may choose a minimum of structural changes and a maximum likelihood that the policy will result in employee smoking cessation; a total ban on workplace smoking or the hiring of only nonsmokers would be more likely to achieve these goals. Alternatively, adopting *no* policy may also be *inexpensive*, so long as there are no employee conflicts over smoking.

The myriad of current smoking policies have been categorized in several ways (US DHHS 1985a; BNA 1986; OTA 1986; ALA 1985a,b). The range, in ascending order of protection for the nonsmoker, includes these:

- (1) No explicit policy (the "individual solution" approach)
- (2) Environmental alterations (separating smokers with physical barriers, using air filters, or altering ventilation)
- (3) Restricting employee smoking, a range with these extremes:
 - (a) smoking permitted except in designated no-smoking areas
 - (b) smoking prohibited except in designated areas
- (4) Banning employee smoking at the worksite
- (5) Preferential hiring of nonsmokers.

Options (1) through (3a) effectively state that smoking at work is acceptable behavior; options (3b) through (5) indicate to employees that nonsmoking is the company norm. Several groups have developed model policies of varying degrees of comprehensiveness to assist employers (ALA 1985a,b; GASP 1985; BNA 1986; Hanauer et al. 1986).

The "Individual Solution" Approach

According to surveys, having no explicit policy is still the most prevalent approach to smoking in the workplace (HRPC 1985; BNA 1986; US DHHS 1986). Smokers and nonsmokers work out differences on their own, using so-called common courtesy or finding an individual solution. According to a 1984 Tobacco Institute-sponsored survey, 70 percent of large employers encourage employees to work out differences on their own (HRPC 1985). When there is no explicit policy, there is the implicit message that environmental tobacco smoke does not represent a hazard. So long as there are few disputes and they are easily settled, this approach is expedient. However, it is not likely to be a successful long-term policy. Nonsmokers in the late 1970s may have been reticent to assert their rights and perceived a burden of confrontation (Roper 1978; Shor and Williams 1978), but there is a growing consensus, even among smokers, that supports abstention in the presence of nonsmokers and smoking restrictions at worksites (Gallup 1983, 1985).

Environmental Alterations

Environmental alterations range from simply separating smokers and nonsmokers to different areas of a room to installing improved ventilation systems to remove environmental tobacco smoke. The advantage of this approach is that it requires no behavioral change of smokers and satisfies some of the wishes of nonsmokers. However, because tobacco smoke easily diffuses beyond physical boundaries, simple barriers provide at best a slight reduction in involuntary smoke exposure (see chapters 3 and 4) (Olshansky 1982). More sophisticated ventilation systems can be prohibitively expensive, and even the best may not be able to clean the air adequately (Repace and Lowrey 1985; Lefcoe et al. 1983). Workplace modification has sometimes been utilized as a company's first step in the development of a more restrictive policy, as happened at the Control Data Corporation in Minneapolis (OTA 1986).

Restrictions on Employee Smoking

The most common workplace smoking policy is to restrict where employees may smoke (BNA 1986). This policy has broad public support; in a 1985 Gallup poll it was the approach favored by 79 percent of U.S. adults, including 76 percent of smokers (Gallup 1985). Policies differ in (1) the proportion of the workplace in which smoking is permitted, (2) whether the default condition is smoking, nonsmoking, or unspecified, (3) who has the authority to designate the smoking status of an area, and (4) whose wishes prevail when smokers and nonsmokers disagree. Policies often categorize the worksite into four areas that are subject to different rules: (1) private offices, (2) shared offices or work areas, (3) small common use areas (elevators, bathrooms), and (4) large common use areas (conference and meeting rooms, auditoriums, cafeterias).

The least restrictive policies permit smoking except in designated no-smoking areas, indicating that smoking is the company norm. Who has the authority to designate an area's smoking status and whether smokers' or nonsmokers' wishes prevail may not be explicit. The usual pattern is for common use areas to be designated either totally no-smoking (elevators, bathrooms, conference rooms) or partly no-smoking (cafeterias, auditoriums). Private offices are left to the discretion of the occupant, who is often given the authority to declare it no-smoking. In shared office areas, where the wishes of smokers and nonsmokers may conflict, each individual may be given the authority to designate his or her own immediate work area, or the policy may stipulate that a compromise be reached. However, this cannot ensure that an employee's self-designated no-smoking area is free of sidestream smoke. Because the majority of an employee's time is spent in the immediate work area rather than in

the no-smoking common use areas, a policy that does not specify no-smoking in shared work areas may not substantially reduce an employee's environmental tobacco smoke exposure. However, these policies may satisfy some nonsmokers' wishes with minimal disruption to smokers. In some cases, companies seeking to limit smoking have adopted this type of policy as a first step to more stringent restrictions or a total ban (e.g., Boeing, cited in OTA 1986).

The most restrictive policies specify that "smoking is prohibited except in designated areas," establishing nonsmoking as the workplace norm. In the strictest policies, smoking is prohibited in shared work areas (unless all occupants agree to designate an area "smoking permitted") and in most common use areas. Policies may limit the areas that can be designated "smoking permitted" and predetermine that the wishes of nonsmokers prevail when conflict occurs. Even stricter regulations stipulate not only the location in which but also the time when smoking is allowed (e.g., work breaks only). So long as the smoking areas do not contaminate the air of work areas, these policies provide greater protection of employees from sidestream smoke at the cost of greater inconvenience to smokers, who may perceive the restrictions as coercive. The productivity of smokers may suffer if they are permitted to take extra smoking breaks or if smoking areas are located too far from the work station.

The variability of smoking restrictions in common work areas was demonstrated in a 1985 survey conducted by the Bureau of National Affairs, Inc. (BNA). Of the 239 companies with smoking policies, 41 percent banned smoking in open work areas, and an additional 20 percent banned it if employees or supervisors wished. Only 8 percent permitted smoking in all open work areas, and 19 percent divided areas into smoking and no-smoking sections. There was more uniformity in treatment of common use areas. Over 50 percent of the companies banned smoking in hallways, conference rooms, restrooms, and customer contact areas, and smoking was partially banned in 58 percent of cafeterias (BNA 1986).

In contrast to shared work areas, smoking was permitted in 56 percent of the private offices in that survey, with occupants often given the authority to designate the office as smoking or no-smoking. This has the potential for charges of unequal treatment and problems with employee morale (BNA 1986).

Banning Smoking at the Workplace

Some businesses—including large corporations, among them Pacific Northwest Bell and the Group Health Cooperative of Seattle—have recently opted for total bans on smoking at work (US DHHS 1985a; Ziady 1986). Bans may be preceded over several years by progressively stricter smoking regulations. Notwithstanding these