TABLE 7.—Smoking regulations reported by Connecticut hospitals in 1973

Type of regulation	1973 survey (Percent of 41 hospitals)
Written smoking policies	78
No tobacco products sold on premises	71
Visitor smoking regulated	71
Employee smoking at duty stations, offices, desks, prohibited	36.5

SOURCE: Davis, K.M. (*17*).

patients' rooms. The most frequent reason given for restricting patients' smoking was the danger of fire, and 2 percent of those that permitted smoking issued fire-resistant clothing to patients who smoked. Also, 18 percent of the institutions reported they had had fires caused by smoking. Finally, this survey reported that 7 percent did not permit visitors to smoke, and in 33 percent, employees were not allowed to smoke in front of the public.

A study of Canadian hospitals (*11*), reported in 1976, found that 66 percent had some form of smoking policy. Smoking was prohibited on 47 percent of psychiatric wards, 45 percent of maternity wards, 37 percent of general wards, and 60 percent of out-patient departments. Depending on the type of hospital, 85 to 90 percent of heart and chest wards prohibited smoking. In 63 percent of the hospitals, physicians and nurses on the wards were responsible for enforcing the smoking regulations; in 25 percent this was the fire marshal's responsibility. Fifty-six percent of the hospitals said the regulations were partially enforced. Forty-nine percent of the hospitals did not sell cigarettes.

In 1977, Crofton (*15*) reported that 36 percent of Scottish hospitals sold cigarettes in some way; 28 percent sold them on the wards through the ward trolley service, and in some cases the trolley service to maternity wards sold cigarettes.

Another study of Scottish hospitals (*16*) in 1977 found that they were more likely to ban smoking by visitors (67 percent) than by patients (12 percent) or nursing staff (44 percent).

In a 1976 survey of 37 hospitals in the Washington, D.C., metropolitan area to determine smoking policies of hospitals (*21*), 21 (57 percent) returned completed questionnaires. Nine of the twenty-one (43 percent) hospitals consistently provided for a nonsmoker's preference for a nonsmoking room; 10 hospitals did not sell cigarettes; and 17 hospitals did not permit staff to smoke in patients' rooms.

Sangster in 1967 (*59*) had reported that a no-smoking ward in an Australian repatriation general hospital was met with enthusiasm by patients and with cooperation by the staff. Of the first 100 patients

discharged from the ward, one-fourth said they had stopped smoking permanently and two staff members also stopped smoking.

Efforts to control smoking in health care settings are not always met with enthusiasm. A hospital that removed vending machines and prohibited the sale of cigarettes in the hospital gift shop shortly after publication of the 1964 Surgeon General's Report on the effects of smoking found that the work of hospital employees was interrupted by trips away from the hospital to buy cigarettes, for themselves and for patients (*60*). Some employees were also charging patients highly inflated prices for cigarettes. As a result, the hospital staff reconsidered their decision not to sell cigarettes.

A more recent study reports on a Massachusetts hospital (*74*) that attempted to influence established smokers to change to low "tar," low nicotine cigarettes by selling only those types. The hypothesis was that smoking behavior could be modified in a limited supply situation. Some employees did try the low "tar", low nicotine cigarettes, but there was no indication of any permanent change in their smoking habits. Many employees expressed resentment at this control of their smoking habits, although there was no indication that employees were leaving the hospital to purchase other types of cigarettes.

A number of specific recommendations have been made by health care providers for the control of smoking in health care settings. The National Forum on Office Management of Smoking Problems recommended formally in 1968 (*54*) that physicians in their offices should: inquire about the smoking habits of all patients; inform each patient about the risks involved in continued smoking and the benefits to be derived from stopping smoking; and advise strongly against smoking. It was also recommended that, to be maximally effective, physicians should actively assist smokers in efforts to stop smoking, create an office environment conducive to cessation, generally prohibit smoking in the office, and provide signs and literature on the subject to emphasize the medical concern. The same report recommended restricting smoking to certain areas of hospitals and prohibiting the sale of cigarettes. More encompassing recommendations were made by Fishman in connection with a survey of Metropolitan hospitals in Washington, D.C. (*21*).

Two lists of recommendations for the control of smoking by health care providers were presented in the 1978 report of the National Commission on Smoking and Public Policy to the Board of Directors of the American Cancer Society. One was prepared by the Veterans Administration (VA) and the second was the Commission's recommendations (*47*). The following are the VA guidelines:

(1) Forbid the distribution of free cigarettes to patients.
(2) Restrict cigarette sales in hospitals, clinics, and other direct care facilities to canteens or similar areas where other products are sold.

(3) Discourage smoking by professional personnel and staff in the presence of patients.
(4) Restrict smoking to specifically designated waiting areas, patients' day rooms, staff lounges, and private offices.
(5) Eliminate smoking among patients with high-risk diseases through aggressive and ongoing patient education.
(6) Encourage all personnel involved in public appearances not to smoke while in the public eye.
(7) Cooperate with community groups in the development and implementation of community-wide programs concerned with the hazards of smoking.

The Commission itself recommended that:
(1) Similar guidelines should be adopted by all government and private hospitals and clinics.
(2) The promotion of healthful lifestyles should be the core of preventive programs offered by physicians, health departments, health plans, and voluntary health associations.
(3) Physicians should counsel patients on the risks of smoking and how to quit smoking or make referrals to various types of smoking cessation programs offered in the community.
(4) Obstetricians, in particular, should take advantage of the "teachable moments" that arise when counseling pregnant patients; expectant mothers are eager to produce healthy infants, and smoking jeopardizes the chance of normal uncomplicated delivery and a normal healthy infant.
(5) State Medicaid programs, prepaid health plans, and insurance companies should either sponsor or pay the cost of smoking withdrawal methods of beneficiaries.

Conclusions

Most studies of health care providers have focused on health professionals (physicians, nurses, dentists, and pharmacists). Therefore, conclusions cannot be drawn regarding the role of others in health care occupations in influencing the smoking behavior of the public. Even for health professionals, there are no studies that quantify and evaluate their impact on smoking practices of the public. However, studies do indicate that the example set by health care providers plays some role in influencing the public, a role recognized by both health care providers and the public.

Health professionals as a group have preceded the general public in improving their smoking habits—they have stopped smoking, reduced health risks by smoking less hazardous forms of tobacco, or reduced the amount smoked. In addition, many who continue to smoke act as exemplars by not smoking when functioning as health care providers.

Health professionals, as a group, by and large recognize their responsibilities as health educators.

Perhaps the most important need at this time is to educate students in the health professions on the health hazards of smoking and their own responsibility to act as exemplars and health educators. As members of the medical hierarchy, their actions will continue to have an influence on others in the health field, as well as on the general public.

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23. THE ROLE OF EDUCATORS.

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The Status of Education About Smoking in U.S. Schools

Most States support education as a potentially important means of preventing smoking and influencing cessation of smoking, although results to date are not always highly satisfactory. A recent survey of State school health programs by the American School Health Association (ASHA) (*14a*) found that of all the various subject areas within health education, instruction on drugs, tobacco, and alcohol is most frequently required by State legislation. The ASHA report cites 35 States having mandated instruction with respect to tobacco. However, in a number of States with mandated health education, the specific subject areas to be taught may be selected by the individual school systems.

Some States have legislation offering their school districts the option of providing comprehensive health education programs, while other States have mandated many individual areas of health education, with the overall result resembling comprehensive programs. Especially during the past decade, there has been a trend toward mandatory health education instruction at the State level. Only three States appear not to have made provisions for any area of health education. In some cases, individual school districts may have legislation that takes precedence over State laws. In such instances provisions for instruction relating to smoking are generally included in the curriculum. Table 1 provides a synopsis of the present status of State education programs relating to drugs, tobacco, and alcohol in the United States. The table clearly indicates the current position that in most States instruction in the area of tobacco is mandated.

TABLE 1.—State school health education programs

State	*Drugs, Tobacco, Alcohol*
Alabama	No formal program at state level.
Alaska	Health education is not required; however, one unit of physical education is required for graduation of which one half unit may be health education.
Arizona	Optional/Permissive
Arkansas	Mandated
California	Mandated
Colorado	Mandated
Connecticut	Mandated
Delaware	Mandated
Florida	Mandated
Georgia	Mandated
Hawaii	Mandated

Idaho	Mandated
Illinois	Mandated
Indiana	Mandated
Iowa	Mandated
Kansas	Health education is not required; however, one unit of physical education is required for graduation of which one half unit may be health education.
Kentucky	
Louisiana	Mandated/Secondary School Level
Maine	Subject offerings are option of local school district.
Maryland	Mandated
Massachusetts	
Michigan	Mandated
Minnesota	Mandated
Mississippi	In grades 1–6, health instruction is required 30 minutes per day. At the junior and senior high school levels, health instruction is optional.
Missouri	Mandated
Montana	Mandated/Secondary School Level
Nebraska	Content selection is local school option.
Nevada	One half unit of health education is required for graduation.
New Hampshire	Mandated
New Jersey	Mandated/Secondary School Level
New Mexico	Mandated
New York	Mandated
North Carolina	Mandated
North Dakota	Mandated
Ohio	Mandated
Oklahoma	Although no separate program exists, health education content is taught in conjunction with other subject areas.
Oregon	
Pennsylvania	Mandated
Rhode Island	One hundred minutes of instruction in health and physical education per week is required for all students, K–12.
South Carolina	Mandated
South Dakota	No formal program at state level.
Tennessee	Mandated
Texas	Mandated
Utah	Mandated
Vermont	Mandated

Virginia	Mandated
Washington	Mandated
West Virginia	Instruction in physical and mental health is required at the junior high and high school levels.
Wisconsin	Mandated
Wyoming	Health education is taught according to local education mandates.
District of Columbia	Mandated

Unless otherwise noted, programs refer to both elementary and secondary levels.

SOURCE: American School Health Association. (*14a*).

The Development and Implementation of School Policies on Smoking

Laws and Regulations Affecting Smoking Practices

In 35 States, school policies on smoking education are based upon State laws that expressly prohibit minors from smoking on school property. Jacobs (*44*), in a review of the effects of State tobacco laws on high school student smoking throughout the United States, reports that most States have established the age of 18 as the demarcation point below which the individual is considered a minor insofar as tobacco laws are concerned. In those State statutes which indicate an age for attaining majority, the youngest age is 15. Four States make no reference to a specific age when using the term "minor" in their tobacco statutes.

To a large extent, differences in State laws appear to reflect the varying mixture of culture and tradition. Review of State tobacco laws for minors shows wide inconsistency throughout the nation. For example, 28 States penalize those who supply tobacco to minors. In 13 States, parental consent can render minors immune to tobacco laws, and two States waive penalties for minors if they divulge their sources. Four States that have repealed all tobacco laws concerning minors leave control in the hands of local governments. Thus a myriad of laws relate to the regulation of smoking practices of school age youth.

In addition to the diversity of State tobacco laws, penalties for both supplier and minor user vary widely. For a first offense in one State, the penalties may range from $1 for the user and $10 for the supplier to $1,000 and/or 1-year imprisonment for both supplier and user in another. Only two States have involved schools in their codes, establishing the penalty of suspension or expulsion for those minors who violate tobacco laws (*44*).

Thus, although most States have laws relating to the use of tobacco, the impact of these laws on behavior is generally believed to be negligible. The general availability of the product through machines that dispense it to any consumer, coupled with a cultural norm militating against enforcement, renders most laws inoperable and ineffective. Since most reported tobacco violations involving minors are referred to the juvenile courts, few court decisions deal with the use of tobacco by minors. In some communities, local fire ordinances set policy on smoking, leaving the school board without a role in decision-making on student smoking.

In the absence of such State laws and local ordinances regarding the school's legal position on smoking, Ivan Gluckman (*11*), attorney for the National Association of Secondary School Principals (NASSP), states that school boards have the legal authority to regulate smoking on school property. Much of the case law in this area emanates from the concept that school administrators have a broad degree of discretion and can prohibit smoking on the basis of concern for the health and safety of students.

In most school districts specific rules have been developed to prohibit smoking on school property. These rules are usually an outgrowth of local safety ordinances and policies by school administrators in cooperation with school boards. In recent years, a number of schools have initiated designated areas as smoking lounges. In his survey of high school principals, Jacobs (*44*) found that this approach (along with suspension and expulsion) was perceived to be an ineffective procedure for controlling high school smoking problems. Though upheld by some courts, the legality of this issue is extremely complex and can be expected to be tested in light of statutes regarding "contributing to the delinquency" by school administrators.

Specific regulations affecting teacher smoking practices in or on school property are generally considered within the domain of the local school administrator. Thus, there is no uniformity among or within States. The most common policy is to prohibit teacher smoking in other than specified locations such as teacher lunchrooms and lounges.

Policy Statements

A number of national organizations, including health and educational groups, have issued position statements on school smoking intended for the guidance of local policy-making officials. For example, NASSP suggests that intensive educational programs be initiated and that efforts be undertaken which will lead to the termination of student smoking (*60*). A position statement adopted in 1971 by the American Association for Health, Physical Education, and Recreation (AAHPER) (*5*) is forceful and unequivocating, noting that the research on smoking has made it abundantly clear that cigarette smoking is a health hazard. Therefore, the Association recommends that schools

adopt "no smoking policies" for all groups utilizing school facilities and that student and faculty smoking facilities be abolished. Like most health officials, Daniel Horn (*11*), former Director of the National Clearinghouse for Smoking and Health (NCSH),[1] is opposed to smoking in schools.

State Department of Education Policies

A number of State departments of education have developed their own policies. Among the leaders in this area are Oregon and Michigan. Oregon's policy recognizes that smoking is hazardous, that most public schools were not designed to accommodate a large number of smokers of any age, that the health, safety, and educational responsibilities of schools are factors to be considered in developing a tobacco policy, and that the rights of nonusers must also be weighed together with the rights of lawful users (*66*).

As expressed in the Oregon policy, "Those 18 years of age or older are allowed to use tobacco in accordance with the times and places designated by the school board. However, there is the further stipulation that students are liable for their habits to the extent that they may preclude their participation in other school activities" (*66*).

In Michigan, students who are 18 years old may legally purchase tobacco. However, schools are urged to discourage young people from taking up the habit. To this end, educational programs are to be developed which point out the dangers of smoking. In addition, Michigan laws prohibit smoking in the school building, on the school premises, or at school functions (*55*).

Institutional Climate and Its Influence on Smoking

While antismoking campaigns are credited with helping to reduce the number of adult smokers in the United States, surveys of youth smoking indicate a consistent pattern of increase over the past decade. This is especially true of teenage girls from ages 13 to 17. The rate of smoking by boys of this age group seems to have slowed and begun to level off (*61*). However, smoking in schools still represents a major problem to school officials. According to one State school administrator, the largest single discipline problem faced by public schools is student smoking (*11*). Despite the fact that most schools have rules against smoking in buildings, more and more students seem to ignore such prohibitions.

Historically, the institutional climate of the schools has been one of prohibition of student smoking on school property. In most school districts, this is the present policy. Thus the position of the schools is quite clear, but there is no evidence that this acts as a deterrent. To the

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[1] Effective July 1978, all information functions of the National Clearinghouse for Smoking and Health were incorporated into the Office on Smoking and Health, Department of Health, Education, and Welfare, Rockville, Maryland.

contrary, some have maintained that such policies contribute to a greater incidence of youth smoking. In our society, smoking is a common, accepted behavior in most settings such as the home, work, or recreation. The school is one of the few institutions that prohibits this behavior. Complicating the issue is the fact that the prohibition of smoking on school grounds generally applies to only one population, the students. Others, faculty and staff, are allowed to smoke publicly in designated areas. Thus, the school as an institution is placed in a position contrary to other institutions in our society and in conflict with notions of equality. In addition, while the institutional policies of most schools regarding smoking are somewhat uniform, the individual behaviors of the teachers and staff of different schools are not. These differing behaviors may result in varying degrees of enforcement, which in turn may produce widely differing institutional climates even though controlling regulations seem similar.

Many school districts have attempted to address the role of their institutional climate and its influence on smoking. A review of the literature on school smoking points out the difficulties faced by the school administrator in attempting to solve the problem. Some have attempted to enforce strict policies against smoking via suspensions and expulsions. In an effort to develop realistic and workable policies, school officials are often placed in the position of having to compromise the larger purposes of education. While acknowledging that it is the school's responsibility to inform students about the hazards of smoking, school administrators are often faced with the realization that the prevention of student smoking is beyond their practical power to control (*60*). Because of the apparent ineffectiveness of antismoking policies and the difficulties of enforcement, or because of expediency, officials "accept reality" and permit smoking, usually out-of-doors or in some well-defined area, during the students' free time. This resigned acceptance on the part of the school administration is illustrated by the statement: "You either have to put up with smoking inside your building or outside your building. We'd rather have it outside" (*11*).

Horn summarizes the basic issue confronting the school regarding the smoking issue: "Does a school want to sanction smoking by permitting it, and thus say, 'We approve of your doing things that will harm your health'? Or does it want to say, 'We will not permit it. We will not help you do something that is not in your interest'?"(*11*). Although most schools which have adopted a limited smoking policy have done so out of expedience more than conviction, the result is a paradoxical one. Such schools include smoking education in their curriculum yet provide students with smoking areas. Although the trend has been for schools to become more permissive in their policies, the more recent emphasis on the rights of nonsmokers, the potential physical effects of passive smoking, and the increasing limitations placed on smoking in public places may result in a reversal of present

patterns. Few directly involved in smoking education efforts advocate overt or tacit approval of youth smoking by the schools.

In addition to formal policies, attention has been directed toward the impact of teachers as contributing factors in the institutional climate and their role in influencing student smoking. A consensus is that since much of what students learn is gained through observation, it is essential that school personnel serve as effective models for their students (*25, 30*).

NASSP acknowledges the problem in their statement: "There is a general agreement that it is one thing to assume moral positions and another to implement those positions" (*60*). Adopting the policy of providing outdoor areas for student smoking has been justified on the grounds that students are going to smoke, and this solution at least protects the rights of the nonsmokers. One school reported that enforcement of the no-smoking rule in school lavatories required too much time and effort on the part of school faculty. However, it was also reported that the new school policy of permitting outdoor smoking called for a stricter enforcement of the rules against smoking in school buildings which in turn required increased faculty supervision (*31*).

School officials of the Niles Township High School, Skokie, Illinois, have a different solution to the problem of student smoking. The offender can choose either a 3-day suspension from school or a seminar composed of four 2-hour sessions on the effects of smoking. The seminar is conducted by two teachers at the school who use instructional materials provided by the American Heart Association, the American Cancer Society, and the American Lung Association. A follow-up survey was conducted of students who had participated in the seminars. The results showed that 12 percent of the students had stopped smoking and another 85 percent stated that they intended to cut down on their smoking (*35*).

Del Campo High School in Sacramento, California, employed an approach similar to that of the Niles Township High School. Students who were caught smoking were sent to a 5-day clinic conducted by the county medical society. This program was well-received by both students and adults and was judged a success (*11*).

Despite the fact that many U.S. high schools have come to accept some form of smoking in school, others are prohibiting smoking anywhere on school grounds. For example, Unified School District 457 in Garden City, Kansas, instituted a policy which banned all smoking on school grounds. This policy applies to students, teachers, and school board members. Students who violate this ban receive an automatic 5-day suspension from school. While enforcing this policy has caused some difficulty in the community, it appears to be working (*64*).

A novel and democratic approach to policy development has been employed by the Edina, Minnesota, school district. Instead of the school board alone establishing smoking policy, the district has sought the

active involvement of students, parents, teachers, school administrators, smokers, and nonsmokers. Individual community members were thus given the opportunity to help the school determine its policy on school smoking. Citizens were invited to select one of three different options or to make their own suggestions. The options included (1) continuation of the current school board policy of prohibiting student smoking; (2) not only continuation of the existing policy, but also the hiring of additional personnel to police or enforce the school smoking ban; or (3) designation of smoking areas for those students 18 years and older (*64*).

Teachers have the potential to influence the values and behaviors established by youth during the socialization process at school. Habits of lifelong duration are often acquired during the school years and are, in part, dependent upon the school environment. The attitudes and examples set by school personnel are factors which should be considered relevant to student smoking. Teachers gain or lose credibility depending, in part, on the consistency of their instruction and their behavior. Support for the potential influence of the teacher as an exemplar model has been observed by Creswell, et al. (*22*), Chen and Rakip (*17*), Mettlin (*54*), and Downey and O'Rourke (*26*). A study by Newman (*65*) attempted to determine how elementary and secondary teachers view their own behavior, their awareness of the smoking problem, and whether they would make changes if they believed it would favorably influence their students. Results showed that teachers were mindful of their responsibilities and were willing to restrict smoking as an example to students; they were also more likely to report a smoking student if they were smokers themselves; and by a 5:1 ratio, they believed that teachers should not smoke where smoking by students is prohibited. Newman concluded that teachers display a readiness to assume their exemplar role in smoking education.

In summary, the institutional climate is considered an important factor influencing youth smoking. While peers and parents have been shown to be more potent as influencing agents, the important role of the school environment cannot be minimized. According to the Office on Smoking and Health, the general climate of acceptability of smoking is probably one of the strongest influences in making smoking attractive to children. There appears to be a consensus that, faced with the significant counterforces of advertising and the smoking practices of parents, other adults, peers, and other people youth admire, reduction of youth smoking cannot be achieved by the schools alone (*18*, *39*, *47*, *81*).

Responsibilities for Education About Smoking

Much of the teaching in today's schools about the effects of tobacco on the body had its origins with the Scientific Temperance Movement in the late 1800's. The Women's Christian Temperance Union (WCTU) led

a highly successful crusade which resulted in the passing of legislation requiring the teaching about the effects of alcohol, tobacco, and narcotics. During the 1880's and 1890's, 38 States and Territories passed laws requiring the teaching of physiology and hygiene. Every State passed laws requiring instruction on the effects of alcohol and narcotics. Many of these same laws also required instruction about tobacco and the effects of smoking.

In general, schools combined the instruction about specific topics of alcohol, tobacco, and narcotics with the broader subject of physiology and hygiene. Despite the success of the WCTU effort in securing the widespread adoption of its legislative proposals, however, the movement was never considered to be effective in terms of achieving a successful program of instruction. It has been characterized as the moralizing and preaching of zeal and negation, with the subject matter frequently containing inaccuracies, myths, and facts that were inappropriate to the age group being taught (*52*).

Contemporary School Programs

In many of today's schools, yesteryear's instruction in physiology and hygiene has led to acceptance in concept and, to a lesser degree, implementation of a comprehensive program of health instruction. In theory, this type of curriculum is designed to reach all students at their various levels of educational development with appropriately graded activities and materials. Teaching about the effects of cigarette smoking is planned as a part of many health instruction programs.

As a result of the curriculum reform movement of the early 1960's and the issuance of the 1964 Surgeon General's Report on Smoking and Health, schools have shown renewed interest in the area of health education and smoking education. School officials' awareness of their responsibilities for smoking education can often be traced to activities of voluntary health agencies such as the cancer, heart, and lung associations and to the extensive work with schools sponsored by the NCSH (now the Office on Smoking and Health).

Recognition of School Responsibility

Stressing the importance of the school's responsibility for education in regard to smoking, NASSP (*60*) has noted the implications to be drawn from establishing school smoking lounges: Such an action "may well implicitly promote smoking in the public schools." In lieu of approving school smoking, NASSP suggests that an intensive educational program be designed and instituted to prevent or terminate smoking among school-age students.

AAHPER urges all schools to take appropriate action to establish policies that are consistent with current information on the hazards of cigarette smoking. Specifically, AAHPER recommends that schools assume "responsibility for curriculum experiences in smoking educa-

tion which are timely and stimulating and provide accurate content, as an integral part of the ongoing, unified health instruction program, kindergarten through the twelfth grade" (*4*).

School codes and regulations have been adopted by State and local school agencies acknowledging the school's obligation to provide smoking education. In Massachusetts, the school code specifies that students be taught the adverse effects of smoking. In establishing its policy governing smoking on school grounds, the local school district of Montgomery County, Maryland, recognized its educational responsibilities by calling for "a forceful, meaningful program of education highlighting the hazardous effects of smoking." The program as adopted provides instruction for students commencing in the upper elementary grades and continuing through the senior high school (*64*).

In 1974, Jacobs (*44*), using a random sample of high school principals drawn from throughout the United States, conducted a mail-questionnaire study, "Effects of State Tobacco Laws on High School Student Smoking." Questions were directed to the principals on a number of key points relating to the school smoking issue. In response to the question, "What is the situation with regard to student smoking at your school?," 49 percent of the principals responding said that the problem was increasing, 29.4 percent reported no change, and 21.6 percent stated that the problem was declining.

If students are permitted to smoke, it is clear that principals would prefer that they either smoke in an outdoor area (48.8 percent) or that they smoke off-campus (34.8 percent). Only a small minority of principals would have students smoke in a designated area of the school building (11.6 percent). Two questions asked in this survey bear directly on the school's role in smoking education. In reply to the question, "Do schools have a responsibility for discouraging smoking?" 65.3 percent of the principals said yes, 20.5 percent said no, and 14.3 percent were uncertain about this role.

When principals were asked to select the most effective procedure for controlling smoking in schools, an educational program was the choice by a clear majority (49.5 percent), with school athletic events identified (14.5 percent) as another procedure to help control school smoking. Less than 1 percent of the principals selected supervision as a measure for controlling the problem.

School and Community Agencies: Cooperation, Delineation of Responsibilities, Use of Available Resources

School and community agencies are involved in efforts aimed at the prevention and cessation of smoking. School programs by their very nature are focused upon the youth population generally through planned instructional intervention incorporated into the health curriculum. The major emphasis of the school program is on prevention. A lesser but emerging effort is also being developed on cessation of youth

smoking. On the other hand, community agencies concerned with smoking and health issues often direct their educational programs at the entire age range, with youth an important component in their total efforts.

Community agency involvement is most frequently evident in mass media programs, antismoking education curricula, and smoking-cessation programs aimed primarily at the adult population. Less evident are instances where community agencies develop and conduct youth programs. Such instruction is generally perceived as a function of the schools. This, however, does not imply a strict dichotomy. Often, schools utilize materials developed by community agencies or consult with agency personnel in an attempt to improve instruction. Yet, a review of related literature shows that most youth antismoking programs do not involve a direct school-community agency type of partnership. It is possible that on a local level varying degrees of cooperation occur, but such efforts are not commonly cited. One recent program that has attempted to involve both school and community health agencies directly is the School Health Curriculum Project (Berkeley Project) developed by NCSH (*24*) which is examined in greater detail in another section. Besides providing much of the materials used, voluntary health- and education-related organizations have played an active role through their local community agencies with respect to the Health Curriculum. This type of direct involvement by school, community, and health agencies is now being incorporated in numerous school districts throughout the country. The approach seems to be an operational model reflecting the consensus of those in the area of smoking education that the problems of youth smoking must be confronted through a cooperative community effort involving school and community officials and voluntary health agencies. Such programs involving active and direct working relationships should be encouraged and promoted. The alternative would be a fragmented and less effective approach to the prevention and cessation of youth smoking.

Curriculum

Requirements in Elementary and Secondary Schools

By State law, instruction in the areas of alcohol, tobacco, and drugs is mandated in at least 35 States with the tendency to incorporate such programs in States currently without such a requirement (*14a*). For example, a 1977 New York State law requires that all schools include instruction to discourage misuse of alcohol, tobacco, and other drugs. Mandated instruction is usually required at both the elementary and secondary levels. Even in States without mandated programs, the inclusion of some degree of instruction about tobacco is commonplace at some point along the continuum from kindergarten through 12th grade.

Whereas requirements about smoking education are generally mandated, the amount of instruction actually occurring at one or more periods of the K-12 cycle varies greatly. Most States leave the decisions of implementation, such as time devoted to a given area, up to the teachers. Thus, individual teachers decide how much time and resources are to be devoted to education about tobacco and health.

It should also be realized that tobacco education is but one of the many areas included in school health programs and that such programs are limited during the K-12 cycle. The actual time devoted to this specific area would appear to be minimal. The extent to which mandated programs that include tobacco education are actually conducted is currently unknown.

Development of Curriculum Procedures

The term "curriculum" as employed by specialists in the field usually means either (1) an educational plan for the learner, or (2) a field of study. In relating a curriculum to smoking education, it is helpful to consider some general principles that have derived from work done in the field of curriculum study and the application of such knowledge to the specific "plan for action" or "plan which guides instruction" (*92*) in the field of smoking education.

Curriculum Foundations

Most curriculum specialists agree that the determinants or foundations of a curriculum would include some, if not all, of the following areas:

1. *Philosophy and the Nature of Knowledge:* Basic assumptions about the nature of knowledge and the philosophy which guides beliefs about knowledge have particular relevance to the formulation of the curriculum (*92*).

2. *Society and Culture:* The school is the institution invented by society to transmit the cultural heritage and to assure its survival. Societal values, assumptions, and concepts of good and bad are translated into the curriculum objectives and learning activities.

3. *The Individual:* The nature of humankind, its biological and psychological characteristics, needs, and capacity to learn have placed certain limits on the curriculum, such as the content included, the organization of the curriculum, and the types of learning activities selected.

4. *Theory of Learning:* While some elements of learning theory enjoy wide acceptance, much difference of opinion exists. Obviously, a particular theory of learning embraced by the curriculum developer will exert marked influence upon the design. For example, Dewey's well-known theory of "learning by doing" has been applied directly to certain types of learning activity. The theory of learning and the importance environment places upon learning have serious implications for the contemporary curriculum developer.

Planning the Curriculum

Tyler, in Schaffarzick and Hampson (78), stresses the importance of conducting a careful preliminary analysis of the curriculum in order to determine clearly the needs to be met. All too often, curriculum projects are developed without first making a systematic analysis of the problem. Such an analysis may call for extensive work with the local community, parents, peer groups, and school officials. If the curriculum to be developed is to be accepted and used by the teachers, special efforts must be made to seek their active involvement and to give careful consideration to their needs.

Curriculum Construction

In his extensive work in curriculum development, Tyler, in Schaffarzick and Hampson (78), has developed a series of steps to be followed:

1. *Selecting and Defining the Objectives:* Curriculum developers must resist the temptation to write their own objectives and must, instead, involve many different groups in the selection process, seeking group deliberation and judgments. Involvement of teachers is essential to their ultimate commitment to the curriculum. Subject matter specialists, curriculum specialists, psychologists, sociologists, and specialists in human development all offer judgments in this area. The level of generality for objectives must be considered; objectives that are too general are nonfunctional, and overly specific objectives are burdensome.

2. *Developing a Philosophy or Point of View:* The theory of learning which is adopted influences the philosophy or point of view of the curriculum developer.

3. *Selecting and Creating Learning Experiences:* The purpose of the learning experience is to meet the curriculum objective, i.e., to perform and to practice the behavior called for in the objective. Appropriate learning activities will invite the attention and interest of the learner and provide satisfaction. Such activities, which can be carried out alone or with peer groups, should be balanced.

4. *Organizing Learning Experiences:* The learning activities should provide maximum impact on the learner. They should be sequenced to build relationships, so that the student's learning builds from one activity to the next.

5. *Curriculum Evaluation:* Evaluation of the curriculum involves determining: (a) the effectiveness of the curriculum approach in its development stage; (b) whether school teachers can, in fact, use the curriculum at the point of implementation; (c) how effective the curriculum is in its operational stage; and (d) the extent to which students have achieved the objectives selected for the curriculum.

Some Pitfalls of Curriculum Implementation

Experience gained through implementation of the many curriculum projects developed during the 1960's indicated some shortcomings. In some cases, teachers were not sufficiently involved in the curriculum planning or writing process. Quite frequently, funding was lacking to train the teacher in the use of the new curriculum.

Two other difficulties have also been identified: (1) the failure to provide for the dissemination of the newly developed curriculum, and (2) confusion over the term "experimental" with reference to new curricula. Hampson, in Schaffarzick and Hampson (*78*), contends that a true experimental design is not suitable for the school setting. The procedure commonly employed in experimental studies of varying the curriculum and of using control groups raises serious political if not moral questions for the curriculum developer. Instead, Hampson suggests that the curriculum developer consider alternative ways of collecting data by using a method of systematic observation over time, such as that employed by the astronomer, and by using in-depth clinical studies.

Opportunities for Smoking Education

The comprehensive health education curriculum has traditionally included the topic of tobacco and its effects on human health. This curriculum, as it has been viewed and widely advocated by professional groups, is designed as a program of health learning experiences beginning at the kindergarten level and continuing through senior high school. The curriculum is considered comprehensive in that it is designed to cover the full range of the subject matter of human health.

A nationwide project, the School Health Education Study (SHES), emerged from the curriculum reform movement of the 1960's. This study, with its conceptual approach to curriculum design, gave renewed emphasis to the comprehensive curriculum plan. One of the 10 major concepts providing the structure of the SHES curriculum involves the study of tobacco, the effects of smoking, and the motivations for smoking. In several other areas of this curriculum, the hazards of smoking are integrated into the conceptual network of the curriculum structure (*80*).

Following closely on the curriculum reform movement, several States enacted legislation calling for comprehensive health education curriculum programs. New York was the first, in 1967, to enact a law requiring a statewide program of health education to be implemented at all levels of instruction. A syllabus developed by the State Department of Education incorporated a five-strand format that included the following elements: physical health, sociological health, mental health, environmental and community health, and education for survival. Tobacco, alcohol, and drugs are included as topics in the sociological health strands. Smoking and health are taught at the