

22. McNeil, H. J., and Holland, S. S.: A comparative study of public health nursing teaching in groups and in home visits. *Am J Public Health* 62: 1629-1637, December 1972.
23. Gutelius, M. F., et al.: Controlled study of child health supervision: behavioral results. *Pediatrics* 60: 294-304, September 1977.
24. Hall, L. A.: Effect of teaching on primiparas' perceptions of their newborns. *Nurs Res* 29: 317-322 (1980).
25. Stanwick, R. S., et al.: An evaluation of the routine post-natal public health nurse home visit. *Can J Public Health* 73: 200-205 (1982).
26. Sackett, D. L.: Evaluation of health services. In Maxcy-Rosenau public health and preventive medicine, edited by J. M. Last. Appleton-Century-Crofts, New York, 1980.

## Current Federal Activities in School Health Education

GLEN G. GILBERT, PhD  
ROY L. DAVIS, MA, MPH  
CHERYL L. DAMBERG, MPH

Dr. Gilbert and Ms. Damberg are with the Public Health Service's Office of Disease Prevention and Health Promotion, Dr. Gilbert as Assistant Director, School Programs, and Ms. Damberg as Research Fellow. Mr. Davis is Chief, School Health and Special Projects, Division of Health Education, Center for Health Promotion and Education, Centers for Disease Control.

Tearsheet requests to Ms. Cheryl L. Damberg, Switzer Bldg., Rm. 2132, 330 C St., SW, Washington, DC 20201.

## Synopsis .....

*In 1979, the Federal Government released a report, "Healthy People," that examined the major health problems and the associated preventable risks facing Americans. For the school-age population in particular, several problem areas are notable, such as violence (suicide and homicide), accidents, and drug and alcohol abuse. A number of risk factors related to personal behavior have been identified for these and other health problems facing young Americans. Comprehensive school-based health promotion programs have the potential to influence positively the health status of the school-age population. This article highlights some of the more important recent Federal activities related to school-based health education.*

**A**LTHOUGH AMERICANS GENERALLY CONTINUE to live longer and improve in most categories of health, the school-age population has shown some disturbing trends. Until recently, the death rate for young Americans 15-24 years of age had been increasing since the mid-1960s. Violence in the form of suicide and homicide continues to account for an alarming number of deaths. Accidents and drug and alcohol misuse are major contributors to these statistics (1-4).

Because a number of risk factors for young Americans are related to personal behavior, health promotion in the schools has significant potential for an important impact on the lives of these young people (5). The Federal Government has recognized this potential and has taken steps to encourage and support State and local school health education activity. This article highlights some of the more important recent Federal activities related to school-based health education—activities that are operationally defined as those occurring in schools or through school-based activities or personnel. This is

not to imply that such activities exclude, or should exclude, the community. Indeed, health education activities that involve the total environment of the student are most likely to change health-related behavior (6).

Much of current Federal health promotion and health education activity is tied to efforts to achieve the 1990 health objectives for the nation (7). The Federal effort to attain these objectives is coordinated and monitored by the Office of Disease Prevention and Health Promotion (ODPHP), a staff unit of the Office of the Assistant Secretary for Health.

### ODPHP Activities

ODPHP has acknowledged that schools have the potential for positive influence on the health of children and adolescents, and hence the nation. As tools for successful interventions have improved, ODPHP has increased its support for school health education.

In March 1983, ODPHP coordinated the Inter-agency Meeting on Health Promotion Through the Schools, cosponsored by the U.S. Department of Health and Human Services and the U.S. Department of Education. As its name indicates, the meeting focused on current Federal activity in health promotion for schools. It achieved several objectives, including publication of an inventory of Federal school health promotion activities that has alerted participating agencies to common interests and resources (8). This meeting in turn stimulated increased communication, as evidenced by the formation of an Ad Hoc Committee on Health Promotion Through the Schools, consisting of representatives from various Federal agencies. The committee meets regularly to share information, carry out recommendations of the interagency meeting, and plan how to reach the school-age population more effectively.

Recently, ODPHP completed the National Children and Youth Fitness Study, which measured the physical fitness levels and activity patterns of American youth 10–17 years old. In this study, a national probability sample of American youth was given a battery of physical fitness tests and an activities questionnaire related to physical fitness. Data are now available from this project, which represents the most rigorous and detailed study of this population and the first national probability sample of it undertaken since 1975 (9).

An important activity facilitated by ODPHP was a 2-day conference on “Prospects for a Healthier America: Achieving the Nation’s Health Promotion Objectives,” held in Washington, DC, in February 1984. More than 60 national groups from the public and private sectors attended. As part of this meeting, a work group comprising members of major professional education organizations with an interest in school health issues was convened to discuss what realistic role(s) schools can play in attainment of the 67 national health objectives that pertain to schools and the school-age population. The work group recommended strategies by which the Public Health Service and professional organizations might better reach the school-age population and decisionmakers in the schools (10). A followup to this meeting was held recently to further identify strategies to achieve the health objectives for the nation.

The Center for Health Promotion and Education of the Centers for Disease Control and ODPHP have recently completed the School Health Education Curriculum Evaluation Project, whose purpose was to evaluate four promising school health educa-

tion models. Results of this project will be available in October 1985 (11).

Working through the National Health Information Clearinghouse, ODPHP has completed several publications of interest to schools, including a listing of available health promotion and health education software (12). Although the listing is not evaluative, it is regularly updated and has been of special interest to schools and health promotion specialists using the microcomputer in health education.

ODPHP has developed a cartoon coloring book—“Thinking Well with the Wee Pals” (13)—to present practical health information based on the Surgeon General’s report “Healthy People” (5). It has published three important resources—“Locating Funds for Health Promotion Programs” (14), “Common Questions and Answers Regarding School Health Education Program Development and Improvement” (15), and “Directory of Federal Personnel Involved in Health Promotion Through the Schools” (16)—and has provided technical assistance and regular correspondence with school health professionals to alert them to new Federal activities.

Finally, ODPHP has initiated a cooperative agreement with the American Association of School Administrators to increase the number and quality of school health education programs. ODPHP will provide technical assistance and financial support to this organization over a 3-year period.

## Centers for Disease Control

For many years, the CDC’s Center for Health Promotion and Education (CHPE) has, through its Division of Health Education, supported activities to promote positive health behavior among young Americans. Notable among these activities have been the development, diffusion, and assessment of the Primary Grade School Health Project (kindergarten through grade 3) and the School Health Curriculum Project (grades 4–7), now commonly referred to as “Growing Healthy” (17,18). By 1985 these projects had been implemented in 3,200 schools in 40 States, reaching more than 500,000 students. Many private schools and several federally operated Indian Health Service schools have also adopted these curriculum projects. In addition, teams of education specialists from England have been trained by CHPE staff, under the sponsorship of the British Health Education Council. The British have adapted “Growing Healthy” for their

own use and now market it in England under the title "My Body."

Another current CHPE activity is the Teenage Health Teaching Modules project (19). The project's goals are twofold: (a) to provide secondary school students with knowledge, skills, and an understanding of behavior that will enable them to act in health-enhancing ways and (b) to develop, test, disseminate information about, and encourage adoption of the 16 health education modules. The modules can be used as a total package, thus serving as a survey course in health education, or can be used individually. They are being showcased nationally in demonstrations designed to stimulate their adoption. The Centers for Disease Control is currently planning for the evaluation of several of these demonstrations.

CHPE also is developing and will field-test a series of training modules for State and local health promotion personnel. These modules will provide an organized approach to planning and implementation of effective community risk reduction programs. One module of the series will have school health as its focus.

CHPE has developed a variety of resources for use by school health education professionals—among them, a materials chart listing (by appropriate age level and topic) materials developed by 14 voluntary associations for use by schools (20). The chart is currently being updated. CHPE also has compiled the only comprehensive compendium of curriculum approaches available in the United States (21). The compendium, which is regularly updated, serves as an important resource for States and local communities in developing their school health curriculums. The most recent edition includes references to major curriculum resources in both the public and private sectors and was featured as a special fall 1984 issue of "Current Awareness in Health Education," CHPE's monthly indexing and abstracting publication (22).

Available for a subscription fee (from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402), "Current Awareness in Health Education" contains information for health education providers on current literature and programs. A number of special bibliographies based on this publication are available, including "Current Awareness in School Health Education" (23).

In addition to the various publications and curriculum projects CHPE has undertaken, the Center serves as a source of technical assistance for school health program planning and development, dissemination of information, problem identification,

*'Because a number of risk factors for young Americans are related to personal behavior, health promotion in the schools has significant potential for an important impact on the lives of these young people.'*

and evaluation. CHPE also collaborates with other appropriate agencies in initiating and supporting the development of school health education information and exchange systems at the national, State, and local levels.

### **National Heart, Lung, and Blood Institute**

The National Heart, Lung, and Blood Institute, one of the National Institutes of Health, supports and coordinates most of the heart, lung, and blood research efforts within the United States. Increasingly over the past decade, NHLBI has funded studies to evaluate school health education projects such as the Chicago Heart Health Curriculum program and the Coronary Risk Factor Intervention in Childhood study (24,25).

NHLBI and ODPHP cosponsored a Working Conference on School Health Education Research in fall 1983. The goal of this meeting was to establish school health research concepts in order to increase the base of scientific knowledge about lifestyle factors and the types of interventions that are effective in school settings. A multidisciplinary group of 60 professionals in the health sciences met in five working groups to describe the state-of-the-art in school health education research and to develop recommendations for future research. Proceedings of this meeting were published in *Health Education* (26) and the *Journal of School Health* (27).

To facilitate the translation of research results into usable health information for students and teachers, NHLBI is working on a project to help students understand and use new health information so that they can make informed health decisions (28). A key piece of this project is "Using New Health Research," one of the new Teenage Health Teaching Modules (29). NHLBI cooperated with CHPE in the development of this module, which has been pilot-tested and revised. The module includes a set of basic concepts about the research process and how it applies to health recommenda-

tions, a set of “critical thinking questions,” and suggestions on how to gain access to additional health information resources.

NHLBI plays an important role in stimulating basic and applied research in the area of school health pertaining to heart, lung, and blood diseases. The Institute also sponsors demonstration projects and education research through its research grants program.

### **National Cancer Institute**

Another component of the National Institutes of Health is the National Cancer Institute. Through the extramural grants program of its Division of Cancer Prevention and Control, NCI supports a variety of research and evaluation programs for school-age children.

Several health education projects are currently underway. The “Smoking Prevention and Youth: Motivational Strategies Project” is designed to facilitate the development of practical, school-based interventions to prevent smoking and tobacco use (30). Another project initiated by NCI is “Help Yourself—Tips for Teenagers with Cancer” (31). This educational unit, consisting of a booklet, an audiotape, and a user’s guide, was designed for use in multiple settings; at present, it is being used in schools to address issues of concern to adolescents with cancer.

Most recently, NCI has funded development of a cancer prevention and risk reduction curriculum for students from kindergarten through grade 12. Called “Project Choice,” this curriculum consists of 2 weeks of lessons for each grade level. Sequential units assist students in learning about cancer and the components of cancer risks, learning how to evaluate information and make decisions, and assuming responsibility for behavior leading to cancer risk reduction and wellness (32). Preliminary evaluation indicates significant positive changes in knowledge and attitudes across most grade levels.

The NCI Smoking, Tobacco, and Cancer Program has established a school-based smoking prevention research project that has two immediate goals: (a) to develop and evaluate school-based interventions to prevent habitual cigarette smoking among adolescents and (b) to provide for the long-term followup of study cohorts and their controls who have been part of previous school-based programs recognized as state-of-the-art interventions in smoking prevention. These studies will be useful in determining the long-term effect of these programs on the rates of adolescents who become habitual cigarette smokers.

Desired features of the interventions supported under this project are that they be cost-beneficial, cost-effective, long-lasting in their effects, generalizable to other populations, and readily adaptable to and affordable by schools. Where justified and appropriate, studies are being funded for 5-year periods to determine the long-term effects of the interventions, particularly as adolescents move into young adulthood.

NCI staff members are coordinating the studies under this project so that the results will be as comparable and as widely applicable as possible. NHLBI is funding complementary studies and is participating in the coordination efforts. To date, NCI has funded nine school-based intervention studies that will cost approximately \$10 million over the next 5 years. Yearly summaries of the program and its findings will be published beginning in late 1985.

Finally, NCI’s Office of Cancer Communications has prepared “Smoking Programs for Youth,” a comprehensive overview of issues and available information (33).

### **ADAMHA Activities**

The Alcohol, Drug Abuse, and Mental Health Administration provides a national focus for Federal efforts to increase knowledge and promote effective strategies to deal with health problems associated with the use and abuse of alcohol and drugs and with mental illness. ADAMHA comprises the National Institute on Alcohol Abuse and Alcoholism, the National Institute on Drug Abuse, and the National Institute of Mental Health.

ADAMHA has produced a guide—“Prevention Plus: Involving Schools, Parents, and the Community in Alcohol and Drug Education” (34)—that outlines a comprehensive approach to prevention of alcohol and drug abuse. “Prevention Plus” provides definitions and major strategies for classroom education and teacher training, parent education, community involvement, early intervention, and school policies regarding substance abuse. The document also contains two appendixes: one that identifies model risk reduction programs sponsored by the Centers for Disease Control and another that includes prevention ideas submitted in response to the Secretary of Health and Human Services’ Initiative on Teenage Alcohol Abuse. Through this document, ADAMHA will link programs and people in order to implement and expand alcohol and drug abuse prevention and intervention programs.

An ongoing school health education activity that ADAMHA supports is "Being Friends" (35), a mental health education curriculum for children 9–12 years old. The package consists of five audiovisual shows that dramatize preadolescent youngsters' relationships with younger children, peers, adults, and the elderly. A discussion guide accompanies each show.

An important activity ADAMHA is currently undertaking is development of a training curriculum, "Mental Health in the Schools" (J. Haughton, *The Evolution of a Comprehensive Mental Health Program*, unpublished doctoral dissertation, Virginia Polytechnic Institute and State University, Blacksburg, VA, November 1984). This curriculum will be designed for training school counselors in school mental health service development and training mental health professionals in school mental health consultation.

ADAMHA also has continued to promote implementation or expansion of alcohol abuse prevention programs. This effort has consisted of development of curriculums, teacher training, parent group support, student assistance programs, and community public education campaigns. Model alcohol and drug abuse prevention programs used within school systems and stemming from ADAMHA-supported research have been evaluated, replicated, and disseminated.

In addition to funding school health education research and curriculum development, ADAMHA provides technical assistance to schools, communities, and State and local governments. For example, the National Institute on Drug Abuse provides expert drug abuse prevention consultation through "Project Pyramid" (36). The Institute also sponsors workshops and meetings to involve the health education personnel of schools in prevention efforts.

## **HRSA Activities**

The Health Resources and Services Administration provides leadership and direction to programs and activities designed to improve health services and to develop health care and maintenance systems that are responsive to people from all levels of society. Within HRSA, the Bureau of Health Care Delivery and Assistance administers the Community Health Centers Program. School health education activities undertaken by the centers include designation of "health awareness days" on which health programs are presented to students and training on health topics is given to teachers.

HRSA also administers programs through its Division of Maternal and Child Health. The division has developed and field-tested three programs on human genetics for high school, middle school, and kindergarten through 6th grade students. The curriculum packages—"Basic Genetics: A Human Approach," "Genes and Surroundings," and "You, Me, and Others"—are geared to the aforementioned age levels and present the basic principles of human genetics (37). A teacher's guide is provided that outlines strategies for incorporating genetics topics in classroom discussions.

With the American Academy of Pediatrics, the Division of Maternal and Child Health has also developed a program for prevention of accidents and injuries to children. The Injury Prevention Program (TIPP) provides a kit for pediatricians to use in discussing injury prevention with clients (38).

Finally, the division has published a document ("Starting Early: A Guide to Federal Resources in Maternal and Child Health") that lists public and professional education resources for use by school-based health educators (39).

Another component of HRSA is the Indian Health Service. IHS plays a vital role in providing comprehensive school health programs for American Indian and Alaska Native students by integrating school health within the entire educational experience. Most IHS health education efforts are conducted in tribally controlled schools and public schools that have a large Indian enrollment.

Programs focusing on smoking cessation, poison prevention, and alcohol and drug abuse are integrated into IHS school health curriculums. An example of an alcohol curriculum currently being used in several IHS schools is "Here's Looking at You" (40). Also in place in several IHS school systems is "Growing Healthy," the previously described curriculum project developed by the CDC's Center for Health Promotion and Education.

Sixty IHS administrators, teachers, and teacher assistants have been provided training to become certified School Health Curriculum Project instructors.

## **President's Council**

The President's Council on Physical Fitness and Sports seeks to advance the physical fitness of children and youth in the United States.

One means used to enlist the support of students is the Presidential Physical Fitness Award. This award, based on the results of a fitness test, is given to children 10–17 years of age to encourage greater physical activity.

The Council also is participating in a "Fitnessgram" program—a computerized fitness test for students in grades 5–12.

Finally, the Council recently sponsored the National Conference on Youth Fitness. This meeting reviewed the need for youth physical fitness, the status of youth fitness, and the role that fitness and sports play in improving the health of the school-age population.

### **Office on Smoking and Health**

A staff unit of the Office of the Assistant Secretary for Health, the Office on Smoking and Health (OSH), provides several services to school health professionals.

OSH maintains an inventory of technical information that can be used by teachers. The inventory includes, for example, the "Teenage Cigarette Smoking Self-Test and Discussion Leader's Guide," a 10-page booklet for use in classrooms or group settings (41). OSH also provides printed advertisements for school newspapers concerning the health consequences of smoking. Finally, OSH serves as a referral agent to individuals for technical assistance in identifying resources helpful to those persons wishing to design or implement smoking prevention programs.

### **Department of Transportation**

Located within the U.S. Department of Transportation is the National Highway Traffic Safety Administration. Since the early 1970s, NHTSA has provided schools with educational materials on the responsible use of alcohol, traffic safety, pedestrian and bicycle safety, and occupant protection. Much of what NHTSA has developed is distributed by national associations and private vendors.

NHTSA currently has six different educational packages or curriculums developed for use in schools. These include:

- "NHTSA Safety Belt Activity Book" and "Three Seconds to Safety," two curriculums for elementary students on safety-belt use (42,43);
- "Guidelines for a K-12 Traffic Safety Education Curriculum," a packet that covers pedestrian and bicycle safety, alcohol education, and safety-belt use and is available to curriculum developers or teachers for use in designing courses (44);
- "You . . . Alcohol and Driving," a curriculum for secondary school populations that has been distributed nationwide by the American Automobile Association (45);

- "Seat Belts Science: Activities for General Science," a package for science teachers that describes a variety of activities to promote the use of seatbelts (46); and
- "Willie Whistle," a kindergarten through 6th grade program on pedestrian safety (47).

NHTSA has also prepared a "how to" guide for developing secondary school student activities concerning the dangers of drinking and driving and the use of seatbelts. The guide provides for student councils a set of activities that can be taught by students. It was distributed by the Association of Secondary School Principals in fall 1984. In addition, the Future Farmers of America are adapting this guide to reach high school youth in rural areas.

Another set of activities on seatbelts, developed by NHTSA for use by elementary and secondary school teachers, teachers of driver education, and health education teachers, also became available in fall 1984. In addition, a safety-belt curriculum for health education teachers in secondary schools will be completed in spring 1986. Finally, NHTSA is evaluating a number of programs on safety-belt use for impact and ease of administration. Following this evaluation NHTSA will develop recommendations for teachers that will be widely disseminated through its periodic bulletin "Research Notes."

### **Department of Education**

The U.S. Department of Education has an explicit mission for school health education on alcohol and drug abuse. In keeping with this mandate, the DOE Alcohol and Drug Abuse Education Program provides field training and technical assistance to teams of representatives from local schools and communities (48). These teams are assisted in developing and implementing a plan of action to prevent alcohol and drug abuse and are given onsite support.

As mentioned earlier, DOE was cosponsor of the March 1983 Interagency Meeting on Health Promotion Through the Schools. A valuable contribution by DOE was compilation of a comprehensive listing of its research, programs, and related activities pertaining to school health. This listing, along with listings for the other participating agencies, is incorporated in the "Inventory of Federal School Health Promotion Activities" (8).

Two additional DOE efforts important to school health education are the Education Resources and Information Center (ERIC) and the National Diffusion Network (NDN).

ERIC is an information system that school health personnel can use to locate literature dealing with health education. Sponsored by the DOE's National Institute of Education, ERIC provides a variety of products and services—for example, data bases, abstract journals, microfiche, computer searches, online access, document reproductions, analyses, and syntheses.

NDN was developed to find solutions to identified education problems and to bring these solutions to the attention of potential users. The network's function is to make exemplary educational programs available to schools and other institutions. Programs are reviewed and approved for nationwide dissemination by the Federal Joint Dissemination Review Panel.

NDN provides dissemination funds to exemplary programs to enable them to make others aware of what they offer and to provide inservice training, followup assistance and, in some cases, curriculum materials to schools desiring to adopt the programs. Programs are offered in a variety of subject areas, including health and physical education (49).

A number of federally developed curriculum programs, such as those developed by the Alcohol, Drug Abuse, and Mental Health Administration and the Centers for Disease Control, are included in NDN.

## Department of Agriculture

The U.S. Department of Agriculture promotes nutrition education within the schools. A primary vehicle USDA uses in this effort is the National Agricultural Library, which makes technical information on nutrition and diet available to educators in print form and through a number of computer data bases such as AGRICOLA. In addition, the USDA-sponsored Food and Nutrition Information Center collects and loans books and audiovisual materials and provides comprehensive reference services.

A new activity for FNIC is the development of a demonstration center for food and nutrition microcomputer software. FNIC provides this service to enable users (primarily nutritionists, food service training personnel, school teachers, health educators, and university faculty) to evaluate health education software packages.

Another important activity USDA supports is the Nutrition Education and Training Program. The program provides grants to State agencies for developing or purchasing nutrition education and training materials and curriculums that address the

*'This is not to imply that such activities exclude, or should exclude, the community. Indeed, health education activities that involve the total environment of the student are most likely to change health-related behavior.'*

needs of children, instructing educators in nutrition education, encouraging use of the school cafeteria for learning about nutrition, and teaching children the relationship between food and health. Overall, this program works to build good food habits by teaching the fundamentals of nutrition to children, parents, educators, and food service personnel.

USDA also works to improve nutritional well-being in the schools by making nutritious food available through the National School Lunch, Breakfast, and Child Care Food programs.

## Summary

Because Federal contributions to school health education are numerous and diverse, it is difficult for individual persons and organizations to be aware of all the significant components. This article has highlighted a number of important activities sponsored by the public sector. The reader is encouraged to contact the appropriate Federal agencies for more detailed information.

## References .....

1. Public Health Service: Health, United States, 1983, and prevention profile. DHHS Publication No. (PHS) 84-1232. U.S. Government Printing Office, Washington, DC, 1983.
2. Gephart, J., Egan, M. C., and Hutchins, V. L.: Perspectives on the health of school-age children: expectations for the future. *J Sch Health* 54: 11-17, January 1984.
3. Centers for Disease Control: Leading causes of death and probabilities of dying, United States, 1975 and 1976. U.S. Government Printing Office, Washington, DC, March 1979.
4. Department of Health and Human Services: Interagency Meeting on Health Promotion Through the Schools—a summary report. Washington, DC, 1981.
5. Department of Health, Education, and Welfare: Healthy people: the Surgeon General's report on health promotion and disease prevention. DHEW Publication No. (PHS) 79-55071. U.S. Government Printing Office, Washington, DC, 1979.
6. Green, L. W., Kreuter, M. W., Deeds, S. G., and Partridge, K. B.: Health education planning: a diagnostic approach. Mayfield Publishing, Palo Alto, CA, 1980.

7. Public Health Service: Promoting health/preventing disease: objectives for the nation. U.S. Government Printing office, Washington, DC, 1980.
8. Office of Disease Prevention and Health Promotion, Public Health Service: Interagency Meeting on Health Promotion Through the Schools: inventory of Federal school health promotion activities. Washington, DC, 1983.
9. Gilbert, G. G., and Ross, J. G.: Summary of findings of the National Children and Youth Fitness Study. *J Phys Educ Recreation Dance* 56: 43-90, January 1985.
10. Office of Disease Prevention and Health Promotion, Public Health Service: Prospects for a healthier America: achieving the nation's health promotion objectives. Proceedings of a conference held in Washington, DC, Feb. 6-7, 1984. Washington, DC, November 1984.
11. School health education evaluation project. Special issue, *J Sch Health*, October 1985, in press.
12. Office of Disease Prevention and Health Promotion, Public Health Service: Health promotion software. National Health Information Clearinghouse, Washington, DC, 1984.
13. Office of Disease Prevention and Health Promotion, Public Health Service: Thinking well with the wee pals. Washington, DC, 1983.
14. Office of Disease Prevention and Health Promotion, Public Health Service: Locating funds for health promotion programs. Washington, DC, 1984.
15. Office of Disease Prevention and Health Promotion, Public Health Service: Common questions and answers regarding school health education program development and improvement. Washington, DC, 1984.
16. Office of Disease Prevention and Health Promotion, Public Health Service: Directory of Federal personnel involved in health promotion through the schools. Washington, DC, 1984.
17. Centers for Disease Control: Primary grade health curriculum project. DHEW Publication No. (CDC) 80-8382. Atlanta, GA, 1980.
18. Centers for Disease Control: School health curriculum project. DHEW Publication No. (CDC) 80-8354. Atlanta, GA, 1980.
19. Educational Development Center, Inc.: Teenage health teaching modules. Prepared under DHHS (PHS) Contract No. 200-79-0922. Boston, MA, 1979.
20. Centers for Disease Control: Health education materials chart. American School Health Association, Kent, OH, 1983.
21. Center for Health Promotion and Education, Centers for Disease Control: A compendium of exemplary school health education classroom programs and teaching/learning resources. Atlanta, GA, 1984. Mimeographed.
22. Center for Health Promotion and Education, Centers for Disease Control: Current awareness in health education. U.S. Government Printing Office, Washington, DC, fall 1984.
23. Center for Health Promotion and Education, Centers for Disease Control: Current awareness in school health education. Atlanta, GA, 1981, 1982.
24. National Heart, Lung, and Blood Institute: Chicago heart health curriculum program. PHS grant No. 21892. American Heart Association, Chicago, 1982.
25. National Heart, Lung, and Blood Institute: Coronary risk factor intervention in childhood study. PHS grant No. 21891. *In* U.S. Department of Health and Human Services: Interagency meeting on health promotion through the schools: inventory of Federal school health promotion activities. Working document. Washington, DC, 1983, pp. 241-242.
26. School health research. *Health Educ* 15(4), 1984.
27. School health research. *J Sch Health* 54(6), 1984.
28. Jacobs, J. A.: Cardiovascular health education and the school-age child. *Health Educ* 13: 30-32, January/February 1982.
29. Center for Health Promotion and Education and the National Heart, Lung, and Blood Institute: Using new health research [Teenage Health Teaching Modules series]. Educational Development Center, Boston, MA, 1984.
30. Department of Health and Human Services: Project RAY: S-risk and youth: smoking. Grant No. R18-CA-29558. *In* U.S. Department of Health and Human Services: Interagency meeting on health promotion through the schools: inventory of Federal school health promotion activities. Working document. Washington, DC, 1983, pp. 251-252.
31. Office of Cancer Communications, National Cancer Institute: Help yourself—tips for teenagers with cancer. NIH Publication No. 83-2211. Bethesda, MD, 1982.
32. Project CHOICE. PHS Grant No. 1-R18-CA 25523-03. Comprehensive Health Education Foundation, Fred Hutchinson Cancer Research Center, Seattle, WA, 1984.
33. National Cancer Institute: Smoking programs for youth. NIH Publication No. 81-2156. Bethesda, MD, 1981.
34. National Institute on Alcohol Abuse and Alcoholism: Prevention plus: involving schools, parents, and the community in alcohol and drug education. DHHS Publication No. (ADM) 83-1256. U.S. Government Printing Office, Washington, DC, 1983.
35. Being friends. National Audiovisual Center, Order Section FZ, Capitol Heights, MD, 1983.
36. Prevention Branch, Division of Prevention and Communications, National Institute on Drug Abuse: Project Pyramid. *In* U.S. Department of Health and Human Services: Interagency meeting on health promotion through the schools: inventory of Federal school health promotion activities. Working document. Washington, DC, 1983, pp. 149-150.
37. Biological Science Curriculum Studies: Basic genetics: a human approach. Kendall/Hunt Publishing Company, Dubuque, IA, 1982.
38. American Academy of Pediatrics: The injury prevention program [kit]. Evanston, IL, 1983.
39. National Center for Education in Maternal and Child Health: Starting early: a guide to Federal resources in maternal and child health. U.S. Government Printing Office, Washington, DC, 1984.
40. National Institute on Alcohol Abuse and Alcoholism: Here's looking at you, a teacher's guide for alcohol education. U.S. Government Printing Office, Washington, DC, 1975.
41. Office on Smoking and Health, Public Health Service: Teenage cigarette smoking self-test and discussion leader's guide. PHS Publication No. 82-50189. Washington, DC, 1982.
42. National Highway Traffic Safety Administration: NHTSA safety belt activity book. Department of Transportation, Washington, DC, 1983.
43. National Highway Traffic Safety Administration: Three seconds to safety. Department of Transportation, Washington, DC, 1982.
44. National Highway Traffic Safety Administration: Guidelines for a K-12 traffic safety education curriculum: Vol. 2. DOT HS 806-449. Department of Transportation, Washing-

- ton, DC, 1983.
45. National Highway Traffic Safety Administration: You . . . alcohol and driving. DOT HS 802-194. Department of Transportation, Washington, DC, 1977.
  46. National Highway Traffic Safety Administration: Seat belts science: activities for general science. Department of Transportation, Washington, DC, 1983.
  47. National Highway Traffic Safety Administration: Willie Whistle. Department of Transportation, Washington, DC, 1983.
  48. Department of Education: The school team approach: alcohol and drug abuse education program. Washington, DC, 1982.
  49. Far West Laboratory for Educational Research and Development: Educational programs that work. Ed. 8. San Francisco, CA, 1981.

## Prevention and Health Policy: A View from the Social Sciences

ROBERT W. HETHERINGTON, PhD  
GERALD E. CALDERONE, PhD

This paper is adapted from a presentation at the 74th Annual Conference of the Canadian Public Health Association, St. John's, Newfoundland, on June 3, 1983. At that time both authors were Senior Researchers with the Division of Intramural Research, National Center for Health Services Research, Department of Health and Human Services, Rockville, MD. Dr. Hetherington is now Professor, Department of Sociology, University of Alberta, Edmonton, Alberta, Canada T6G 2H4. Requests for tearsheets to Dr. Hetherington.

### Synopsis .....

*A theoretical framework is outlined which identifies four major problem areas which must be dealt*

**T**HIS PAPER HAS TWO PURPOSES. The first is to suggest a general theoretical framework which helps organize the complex issues involved in policymaking. The second is to discuss important policy issues in disease prevention and health promotion within this framework.

### Theoretical Framework

The theoretical framework is illustrated in figure 1. First, in this framework activities are defined as either internal or external. If a system for the delivery of prevention services, for example, is being considered, all prevention activities, however defined, would be internal within the system. Other nonprevention activities of parts of that system, and activities of other systems, would be external. External activities are relevant when they involve ex-

*with in the formulation, implementation, and evaluation of social policy. Certain issues relevant to policy concerning health promotion and disease prevention are discussed within this framework. The first problem area, adaptation, is concerned primarily with resources; the second area, goal attainment, deals with organizational issues; the third, integration, is concerned with motivations; the fourth, pattern maintenance, concentrates on questions of values. Policymaking is seen as an attempt by governing bodies to resolve problems in all these areas, and the success of any policy may be judged by the extent to which major issues in each area are dealt with equitably and reasonably.*

changes between the system and its environment. The simplest of these exchanges is the payment (by government, insuring agencies, or the patient) to a provider for rendering a service which is defined as "preventive." Exchanges, however, do not necessarily involve money.

Second, activities are either instrumental or affective. Instrumental activities are means for attaining desired ends. An example of this is the accumulation of money, which has value only insofar as it permits access to other things. Affective activities are valued primarily as ends in themselves, although they may also be employed as means. An example of affective activity would be the universality of Canada's Medicare legislation, which guarantees equal access of all citizens to medical care regardless of their individual financial resources. This universality is considered of value in and of