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ABSTRACT

This manual was developed to help school personnel evaluate school health efforts. It is a nontechnical, practical guide that offers an overview of school health, including health education, health services, and a healthful school environment. A basic evaluation framework is presented for systematically identifying, planning, implementing, and assessing school health, from policy to practice. Practical guidelines are offered, using examples from the school setting, about how to evaluate school health activities. Included in the manual is an annotated, cross-referenced set of resource materials of practical value in conducting evaluations. Chapters cover the following topics: (1) getting ready to evaluate school health; (2) how to determine desirable school health goals; (3) how to establish feasible school health plans; (4) how to assess the implementation of school health activities; and (5) how to assess the effectiveness of school health activities. An evaluation check list is provided which can be used as a needs assessment instrument for each of these topics. A four-page list of references concludes the document. (JD)

How Healthy Is Your School?

Guidelines for Evaluating School Health Promotion

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By

Steven Nelson, Ph.D.

Northwest Regional Educational Laboratory

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The mission of the Office of Disease Prevention and Health Promotion is to help promote health and prevent disease among Americans through oversight and support of Department of Health and Human Services initiatives and programs in prevention.

Special attention is given to facilitating the prevention activities of the five Public Health Service agencies: the Alcohol, Drug Abuse, and Mental Health Administration; the Centers for Disease Control; the Food and Drug Administration; the Health Resources and Services Administration; and the National Institutes of Health.

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DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Office of the Assistant Secretary
for Health
Washington DC 20201

Dear Colleague:

This manual describes methods and resources for evaluating health-related activities in your school. Your support is needed to put these practices into action. Planning and evaluation for the improvement of school health require administrative decisions.

Should your school's health promotion efforts be evaluated? To help you decide, the first chapter of this manual addresses some basic issues about school health--what is it, why is it important, and how can evaluation improve it? Please take a few moments to review this first chapter.

The formation of a school health team to conduct the evaluation activities is recommended. The specific tasks to be completed by the team depend upon the evaluation questions to be answered. The manual is organized to enable you to focus on those evaluation questions which are most relevant to health activities in your school. Please complete the checklist on the following page to serve as a guide for your school health team.

I hope that you and your school health team find the evaluation activities to be challenging and rewarding.

Sincerely,

J. Michael McGinnis, M.D.
Deputy Assistant Secretary for Health
Director, Office of Disease Prevention
and Health Promotion

SCHOOL HEALTH EVALUATION CHECKLIST

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CHAPTER I

Getting Ready to Evaluate School Health

As a nation, we are living healthier and longer lives. Yet the death rate of young people, ages 15 to 24 years, has actually increased for the past two decades. Health care costs have skyrocketed to more than ten percent of the gross national product. If the future of our nation is dependent upon the health of our children, then the picture is not a bright one (Gilbert, Gold & Damberg, 1985).

The nation's schools are viewed as a primary vehicle for promoting the health of our children:

Schools seen as primary setting for promoting health.

> The school, as a social structure, provides an educational setting in which the total health of the child during the impressionable years is a priority concern. No other community setting even approximates the magnitude of the grades K-12 school education enterprise, with an enrollment ... of 45.5 million in nearly 17,000 school districts comprising more than 115,000 schools with some 2.1 million teachers ... Thus, it seems that the school should be regarded as a social unit providing a focal point to which health planning for all other community settings should relate (American Public Health Association, 1975).

The expectations placed upon schools are not limited to education. Schools are responsible for protecting and promoting the health and well-being of students.

> Although school health is not a new idea, a focus on the school as the primary area for health education, health promotion, and health care is new. Some now regard the school as the appropriate place in which to teach students about their health and how to assume responsibility for it. In their view, health should be an integral part of the curriculum, as is mathematics or history (Bruhn and Nader, 1982).

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[2] Reprinted by permission of Aspen Systems Corporation.

But how does a school address important health issues when resources are limited? Evaluation procedures can help a school determine which goals need attention, how they can feasibly be addressed, whether health activities are being done as intended and what results are being realized. Evaluation information enables us to make informed choices about school health activities.

This manual was developed to help school personnel, step by step, to evaluate school health efforts. It is a nontechnical, practical guide that offers administrators, teachers, health personnel and other readers:

This guide offers practical, nontechnical approach to evaluating school health.

1. An overview of school health, including health education, health services and a healthful school environment.

2. A basic evaluation framework for systematically identifying, planning, implementing, and assessing school health, from policy to practice.

3. Practical guidelines, using examples from the school setting, about how to evaluate school health activities.

4. An annotated, cross-referenced set of resource materials of practical value in conducting evaluations.

Although the evaluation of school health may appear formidable, this manual has organized the various evaluation steps, staff roles and health activities into a manageable set of tasks. The manual should give you the background and resources necessary to design and administer a sound evaluation of your school's health activities.

School health is a shared responsibility. Therefore, while school administrators may be a primary audience for this material, others--including teachers and school health personnel--will find it useful, too. We recognize that successful evaluation and decision making require the cooperation of a number of people. So, our approach to evaluation calls for a school health team to be responsible for evaluation activities. The principal, nurse and health teacher should be on this team; but it should also include parents and representatives of relevant community agencies, as well as central office staff responsible for curriculum, student services, transportation and facilities.

School health programs vary greatly across the country. Some school efforts are so new or limited that staff may not think them ready for evaluation. Others are so well developed and accepted that staff may believe evaluation is unnecessary. This manual, however, is based upon two simple assumptions. First, <u>every school is influencing health</u>, either directly or indirectly. Second, <u>every school's health activities can be improved</u>. Evaluation is critical to systematic improvement. If these assumptions are correct, then the evaluation procedures presented in this manual are relevant to every school in the nation.

Planning and implementation emphasized along with student outcomes.

In our view, evaluation has more to do with good planning and management than with conducting research. Therefore, you will find that the manual focuses on planning and implementing

health activities, as well as assessing student outcomes. References that we encourage you to read are annotated directly in each section, along with information on how they may be obtained. Those publications that we have cited as background resources are appended in the reference section.

The manual is organized into a series of sections which describe the major steps in the evaluation process. This chapter will help you find answers to the following questions:

A. Does your staff understand and engage in school health promotion?

B. Are you convinced that school health is important?

C. Do you know what school health resources are available?

D. Do you know what questions you want the evaluation to address?

E. Have you established a school health team?

A. Does your staff understand and engage in school health promotion?

In 1979 the Surgeon General published a report on health promotion and disease prevention. The report describes three health strategies:

> Medical care begins with the sick and seeks to keep them alive, make them well, or minimize their disability.
>
> Disease prevention begins with a threat to health--a disease or environmental hazard--and seeks to protect as many people as possible from the harmful consequences of that threat.
>
> Health promotion begins with people who are basically healthy and seeks the development of community and individual measures which can help them to develop lifestyles that can maintain and enhance the state of well-being.
>
> Clearly, the three are complementary, and any effective national health strategy must encompass and give due emphasis to all of them.
>
> Beginning in early childhood and throughout life, each of us makes decisions affecting our health. They are made, for the most part, without regard to, or contact with, the health care system. Yet their cumulative impact has a greater effect on the length and quality of life than all the efforts of medical care combined (U.S. Public Health Service, 1979).

The nation's schools have a role in these health strategies, particularly in the areas of prevention and promotion. Schools can engage in prevention and promotion in a variety of ways. School health is considered to include health education, health services and a healthful school environment (Education Commission of the States, 1981). Each of these three components of school health should encourage and promote positive health behaviors among students and staff. Most health professionals agree that

"School health" includes health education, health services and a healthful school environment.

school health activities should emphasize the development of positive health habits and lifestyles that contribute to optimal health. In addition, there is often a need to change negative health behaviors. Behaviors that typically are the target of attention are smoking, alcohol and drug abuse, diet, exercise and stress management (Iverson and Kolbe, 1983). The three components of school health are closely related and complementary.

Health education is designed to help students recognize how their personal behavior affects their health, learn to make responsible health-related decisions, acquire health-related knowledge, develop positive attitudes and habits, and learn to influence factors in the home and community that affect health (Kolbe, 1984). Health instruction in the classroom setting usually includes personal and family health; nutrition; mental and emotional health; use and misuse of substances; diseases and disorders; consumer health; accident prevention and emergency care; and community health and environmental health (California SDE, 1978).

But health education goes well beyond formal instruction in the classroom setting. First, all adults in the school are role models for students. Do these role models demonstrate healthy habits and lifestyles? Second, a fair amount of time is spent by students in school outside the classroom--going to and from school, going to lunch or recess, changing classes and attending assemblies. What are students learning about health in those settings?

Health services contribute to school health by providing protection against certain communicable diseases, offering health appraisals and screening, helping staff identify and deal with health-related problems, monitoring health maintenance plans and other self-care activities of students, conducting health counseling with students and families, offering support services to all students, including the physically impaired, and providing emergency care (Carlyon, 1980).

The third component is a healthy social and physical school environment. The school environment is the setting within which schooling takes place. A healthy social climate depends upon the interactions and relationships of the students and staff. Are individuals treated with dignity and respect? Is communication warm and open? Are policies perceived by students, parents and staff as fair, appropriate and consistently applied? Are there clear expectations for students and staff? Is school a nice place to be?

A healthy physical environment requires buildings and a campus that are structurally safe and secure, with adequate heating, lighting, ventilation and acoustics. It also requires pure and safe water, adequate sanitation, safe buses, the absence of possible health hazards (e.g., asbestos), and appropriate safety procedures/devices (e.g., disaster plans).

Table 1 on the following page summarizes these three components of school health. In looking at the various elements in Table 1, consider the health of your school. Are the staff facilitating positive changes in students' health?

Table 1
School Health Components

School Health Services	School Health Instruction	Healthful School Environment
School readiness programs including preschool health screening and assessment of emotional and social readiness	Planned health curriculum: broad program goals	Friendly staff and pupil relationships
Health appraisal by observation and periodic screening	health instruction with teaching-learning objectives for all grade levels	Secure and comfortable school environment
Health counseling about physical and emotional problems for pupils and families, with referral and followup	Adequate teacher preparation and in-service	School site of adequate size, location and safety
Consultation with teacher relating to physical and emotional problems encountered, and recommendations regarding participation in physical education, special education programs and other school activities	Resource materials and consultation for teachers	School construction meeting standards for size, sanitation, safety features, lighting, furniture, acoustics, heating and ventilation
Emergency policies, facilities and first aid	Health education for parents and other adults	Safety inspection, drills and patrols with pupil planning and participation
Immunizations, tests and communicable disease procedures	Educational adaptations for handicapped children	Proper school maintenance
Dental examinations, fluoride treatments and care	A comprehensive physical education program	Adequate and safe physical education and recreational facilities and staff
Monitoring self-care and health maintenance plans	Staff model positive health behaviors and lifestyles	School food service programs that meet standards
Cumulative records including health, accidents and social development		Safe bus operation
		Safety procedures and equipment used in laboratory settings
		Emergency and disaster procedures
		Safely supervised activities outside the classroom

Adapted from: Carlyon, P. (1980). Physician's guide to the school health curriculum process. (Appendix I). Chicago, IL: American Medical Association, Health Education Unit. Reprinted with permission from the author.

One way to find out if your staff engages in school health promotion is to discuss it at a staff meeting. What do we do to promote positive health behavior in students? What do we do to protect students from harm? What do we do to prevent accidents, illness and injury?

Consider completing the following guide for rating your school health program as a basis for discussion. The guide was developed by the American School Health Association for planning school health improvement efforts.

A Guide For Rating Your School Health Program

How does your school rate? Can it pass a school health inspection? The checklist below will help you evaluate the school's quality.

Health Education	Yes	To a Degree	No	Change Needed
1. Does the school system have a designated school health curriculum?				
2. Do your elementary teachers have a sufficient background in health content to adequately teach health instruction?				
3. Are there ample inservice opportunities for teachers to upgrade their skills in health instruction?				
4. Are teachers with a degree in health education employed for grades 7-12 to teach health education?				
5. Is there designated time for health instruction K-6?				
6. Is there a required health education course for graduation 7-12?				
7. Are funds budgeted annually to purchase health instructional materials?				
Health Services	**Yes**	**To a Degree**	**No**	**Change Needed**
1. Does your board make available to your school the services of: a. a school nurse? b. a physician? c. a dentist? d. a psychologist? e. a social worker?				
2. Does your school have a mechanism by which indigent children can receive health care?				
3. Does your school system require immunizations prior to entering school?				
4. Does your school system require that students need their immunizations up to date?				
5. Does your school recommend a medical examination prior to entering school?				
6. Does health counseling occur with students and/or parents as a follow-up to health screening and medical examinations?				
7. Does the school nurse help handicapped students plan individualized programs of study, as necessary?				
8. Are the special needs of handicapped students met with regard to health services?				
9. Are school personnel trained in first aid and emergency procedures?				
10. Is there an established written policy to be followed in case of accident, illness or disaster?				
11. Are school health services adequately funded?				

School Health Environment	Yes	To a Degree	No	Change Needed
1. Does the school meet state and local environmental health construction standards?				
2. Is the building and equipment kept clean and in good repair?				
3. Does the structure of the building facilitate access to handicapped students? (Ramps, lavatories, etc.)				
4. Are there periodic inspections of the school environmental facilities?				
5. Are established safety policies maintained?				
6. Is there good rapport between pupils, teachers and administration?				
7. Is a positive emotional climate conducive to learning maintained?				

From: American School Health Association. (1983). A healthy child: The key to the basics. School Health Advocacy Kit. Kent, OH: American School Health Association. Reprinted by permission of the American School Health Association.

B. Are you convinced that school health is important?

It is easy to overlook the important role that health plays in students' academic and personal learning. In fact, students' health and their education performance are interdependent. The healthiest children are best equipped to benefit from any learning opportunities. And, in turn, by attending to health issues and lifestyles, schools can directly protect, maintain and promote their students' physical well-being, cognitive performance and positive attitudes--not only during school, but on into adulthood. As we now recognize, "...no school can choose to either maintain or not maintain a school health program; it can choose only to have an adequate or inadequate health program" (Allanson, 1978).

Healthy children participate and benefit more from learning activities.

Clearly, the healthier the child, the more he or she is likely to participate in and benefit from learning. Identifying health problems, minimizing the effects of communicable diseases and detecting vision or hearing difficulties are all important, but they represent only one dimension of school health. Various health initiatives also can protect students from potential health and safety hazards in the school, provide prompt intervention with health problems, offer immediate assistance in emergencies, and realize education's role in promoting positive physical, mental, and social behaviors. As California's Health Instruction Framework (1978) points out, "Health affects everything individuals do and the way they feel about themselves, others, and their environment."

Similarly, the health of the school staff influences the well-being of students. "Not only will a healthier school staff mean a more productive and efficient school; a school staff that practices wellness will, by its example, provide one of the most effective ways of developing good health habits in pupils" (Health Insurance Association of America and American Council of Life Insurance, 1985).

Here are some resource materials recommended for you and your staff to review:

Davis, J.H. (1983, December). A study of the high school principal's role in health education. Journal of School Health, 53, (10), 610-612.

This article identifies functions of the school principal as manager of the entire school health effort and then surveys the actual role of administrators. The discussion of administrative roles and responsibilities is helpful in understanding expectations cf the principal.

Iverson, C. & Kolbe, L.H. (1983). Evolution of the national disease prevention and health promotion strategy: Establishing a role for the schools. Journal of School Health, 53 (5), 284-302.

This article summarizes the national focus on health promotion and describes the impact this thrust has had on school health efforts. It details goals from "Objectives for the Nation" that can be attained or influenced by the schools and illustrates how schools might address these priority areas. The article provides important background information.

Perry, C. (1984). Health promotion at school: Expanding the potential for prevention. School Psychology Review, 13 (2).

This article describes the focus of school health promotion, identifies its various components and examines the kinds of strategies involved in promotion activities. It provides a useful conceptual background as well as specific health examples to aid readers in understanding how health promotion can be used to enhance student behaviors.

U.S. Department of Health and Human Services. (1979). Healthy people, the Surgeon General's report on health promotion and disease prevention. (3 vols.). Washington, DC. U.S. Government Printing Office (Stock Nos.: Part I-017-001-00416-2; Part II-017-001-00417-1; Part III-017-001-60418-9). Available from: Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Price: Part I-$6.00; Part II-$7.00; Part III-$6.00.

Federal disease prevention and health promotion goals and the strategies to achieve them are included in this important and influential document. Its central theme is the role that individuals can take to improve their own health. The document also identifies major health problems, risks associated with each life stage, and health goals to be achieved by 1990.

C. Do you know what school health resources are available?

Resources are necessary to engage in school health activities. But many of these resources do not necessarily require the direct expenditure of dollars. Within the school, there are four resources available for enhancing school health:

1. Policies and procedures are those administrative rules and guidelines which can be adapted to improve school health. As a strategy for school improvement, policy development is of particular value when it's desirable to have staff, students and administrators all approach a problem or situation in the same way. For example, school policy might prescribe procedures to be followed in assessing the needs of handicapped students, the hours of instruction to be devoted to health education, the certification requirements for staff, immunization requirements, sanitation standards and the like. School policies can promote positive health behaviors, as well as restrict undesirable health behaviors. For example, smoking in the faculty lounge can be restricted by policy. A policy on translating a proportion of sick leave days into a personal leave day promotes positive health behaviors and productivity.

Many resources for school health improvement are already available.

2. Curriculum is a second resource for improving school health. Curriculum development focuses primarily on health education issues. We must recognize that "curriculum" is not just instructional materials, but rather a set of learning objectives, instructional resources and student assessment procedures organized around a particular instructional philosophy. These components must work together.

   The instructional philosophy which a school holds for health education should influence the health services and school environment as well. If the health of students is important, it should be reflected both in and out of the classroom. What is taught should be reinforced by what is done.

3. School personnel are the greatest resources for promoting school health. Staff development involves both preservice and inservice training. It's an effective school improvement strategy whenever staff performance is a major factor in determining whether

goals are met--in other words, nearly always. Staff development is usually taken to mean workshops. But it could also include professional reading, visitations to other schools and classrooms, formal coursework, team teaching, group planning and orientations. As an integral part of a school health plan, staff development increases individuals' awareness, and enhances their competence in using new materials or supporting new health services. Staff development is essential for improving school climate. Health activities can also focus directly on activities which promote the health of the school staff.

The work of the school staff to promote health need not be limited to teachers and nurses. All school personnel have a responsibility for the health and well-being of students. The counselor, librarian, bus driver, custodian, and cook can each have a positive influence on students' health. People do make the difference.

A study of school districts which were exemplary in the promotion of school health revealed three common characteristics:

a. The shared enthusiasm for the school health activities available for the staff, students and community.

b. Administrative interest in the addition of school health activities to improve the physical and emotional well-being of school personnel.

c. Staff respect for health education as an academic discipline that should receive the same resources and attention as other major subjects.

The study also found that staff development was the major factor which created this exemplary atmosphere. The inservice was directed at personal health issues, not just professional development (Stevens, 1984). This suggests that the development of the staff as a resource for school health promotion is critical. The excitement and commitment of the staff to school health is a key ingredient for a successful program.

4. School facilities are the fourth resource which can be used to promote health. Facility development involves modifying the school's physical environment. First, it requires the removal or control of obvious health hazards. Second, it calls for the design of facilities conducive to learning, which have proper lighting,

ventilation and space. Third, it demands attention to the aesthetic features of a school and its ground features that make the school liveable, comfortable, secure and inviting. In addition, a positive school climate calls for continual, healthy interaction among students and staff. Thus, staff development--in addition to facility development--can be critical to any plan for enhancing school climate.

There are also additional resources which can be tapped outside the school. Parents and the community represent a very important resource for improving school health. The health and well-being of their children in and out of school is very important to parents. To this end, they can help in promoting school health initiatives through advocacy in the local community. The American School Health Association (P.O. Box 708, Kent, Ohio 44240) has developed a kit for increasing the awareness of the general public and the professional community about the need for and benefits of school health. We recommend that you obtain this resource, which is entitled, A Healthy Child: The Key to the Basics. School Health Advocacy Kit. Price: $5.00.

Information for promoting school health is available from your state department of education and state department of health. Local colleges and universities can offer assistance. In addition, a number of professional associations, public service agencies and offices of the federal government provide materials and information on a variety of health-related topics. A number of these school health resource agencies and associations are listed on the following pages.

School Health Resource Agencies and Associations

Action on Smoking and Health (ASH)
2013 H Street, N.W.
Washington, D.C. 20006

Al-Anon Family Group Headquarters, Inc.
One Park Avenue
New York, New York 10016

Alcoholics Anonymous
P.O. Box 459
Grand Central Station
New York, New York 10163

American Academy of Pediatrics
P.O. Box 1034
Evanston, Illinois 60204

American Cancer Society
777 Third Avenue
New York, New York 10017

American Dental Association
211 East Chicago Avenue
Chicago, Illinois 60611

American Diabetes Association
Two Park Avenue
New York, New York 10016

American Dietetic Association
430 North Michigan Avenue
Chicago, Illinois 60611

American Heart Association
7320 Greenville Avenue
Dallas, Texas 75231

American Lung Association
1740 Broadway
New York, New York 10019

American Medical Association
535 N. Dearborn Street
Chicago, Illinois 60610

American National Red Cross
17th and D Streets, N.W.
Washington, D.C. 20006

American Nurses Association
2420 Pershing Road
Kansas City, Missouri 64108

American Public Health Association
1015 15th St., N.W.
Washington, D.C. 20005

American School Food Service Association
4101 East Iliff Avenue
Denver, Colorado 80222

American School Health Association
P.O. Box 708
Kent, Ohio 44240

Association for the Advancement of
Health Education/AAHPERD
1900 Association Drive
Reston, Virginia 22091

Association for Retarded Citizens
(formerly National Association
for Retarded Children)
P.O. Box 6109
Arlington, Texas 76011

Asthma and Allergy Foundation of America
1302 18th St. N.W., Suite 303
Washington, D.C. 20036

Cancer Information Clearinghouse
National Cancer Institute
Office of Cancer Communications
Bldg. 31, Room 10A-18
9000 Rockville Pike
Bethesda, Maryland 20205

Center for Health Promotion
and Education
Centers for Disease Control
Building 1 South, Room 558249
1600 Clifton Rd., N.E.
Atlanta, Georgia 30333

Clearinghouse for Occupational Safety
and Health Information
Technical Information Branch
4676 Columbia Parkway
Cincinnati, Ohio 45226

Clearinghouse on Child Abuse and Neglect
P.O. Box 1182
Washington, D.C. 20013

Clearinghouse on the Handicapped
Switzer Bldg., Room 3119
330 C St., S.W.
Washington, D.C. 20201

Consumer Information Center
Pueblo, Colorado 81009

Consumer Product Safety Commission
Washington, D.C. 20207

Cystic Fibrosis Foundation
6000 Executive Blvd., Suite 309
Rockville, Maryland 20852

Environmental Protection Agency
Public Information Center, Room PM 211-B
401 M St., S.W.
Washington, D.C. 20460

Epilepsy Foundation of America
4351 Garden City Drive
Landover, Maryland 20785

Food and Drug Administration
Office of Consumer Affairs
Public Inquiries
5600 Fishers Lane (HFE-88)
Rockville, Maryland 20857

Food and Nutrition Information Center
National Agricultural Library Bldg.
Room 304
Beltsville, Maryland 20705

Leukemia Society of America
733 Third Avenue
New York, New York 10017

Muscular Dystrophy Association
810 Seventh Avenue
New York, New York 10019

Narcotics Anonymous
World Service Office
P.O. Box 9999
Van Nuys, California 91409

National Association of
School Nurses, Inc.
P.O. Box 1300
Scarborough, ME 04074

National Association for Hearing
and Speech Action
10801 Rockville Pike
Rockville, Maryland 20852

National Association of State School
Nurse Consultants
New Hampshire Department of Education
101 Pleasant Street
Concord, New Hampshire 03301

National Center for Health Education
30 East 29th Street
New York, New York 10016

National Clearinghouse for
Alcohol Information
P.O. Box 2345
Rockville, Maryland 20852

National Clearinghouse for
Drug Abuse Information
P.O. Box 416
Kensington, Maryland 20795

National Clearinghouse for Family
Planning Information
P.O. Box 2225
Rockville, Maryland 20852

National Council on Alcoholism, Inc.
733 Third Avenue
New York, New York 10017

National Cystic Fibrosis
Research Foundation
202 44th Street
New York, New York 10017

National Dairy Council
6300 North River Road
Rosemont, Illinois 60018

National Diabetes
Information Clearinghouse
Box: NDIC
Bethesda, Maryland 20205

National Diffusion Network Division
U.S. Department of Education
Brown Bldg., Room 613
400 Maryland Ave. S.W.
Washington, D.C. 20202

National Easter Seal Society
2023 West Ogden Avenue
Chicago, Illinois 60612

National Fire Protection Association
Battery March Park
Quincy, Massachusetts 02269

National Foundation/March of Dimes
1275 Mamaroneck Ave.
White Plains, New York 10605

National Health Information Clearinghouse
P.O. Box 1133
Washington, D.C. 20013-1133

National Heart, Lung, and Blood Institute
Building 31, Room 4A-21
9000 Rockville Pike
Bethesda, Maryland 20205

National Hemophilia Foundation
19 West 34th Street, Room 1204
New York, New York 10001

National Highway Traffic Safety Administration
U.S. Department of Transportation, NTS 11
400 7th St., S.W., Room 5130
Washington, D.C. 20590

National Information Center for Handicapped Children and Youth
P.O. Box 1492
Washington, D.C. 20013

National Institute for Occupational Safety and Health
5600 Fishers Lane
Rockville, Maryland 20857

National Institute of Mental Health
Science Communication Branch
Public Inquiries Section
Parklawn Bldg., Room 15C-17
5600 Fishers Lane
Rockville, Maryland 20857

National Interagency Council on Smoking and Health
c/o American Cancer Society
777 Third Avenue
New York, New York 10016

National Kidney Foundation
2 Park Avenue
New York, New York 10016

National Maternal and Child Health Clearinghouse
3520 Prospect St., N.W., Suite 1
Washington, D.C. 20057

National Mental Health Association
1021 Prince Street
Arlington, Virginia 22314

National Multiple Sclerosis Society
205 East 42nd Street
New York, New York 10017

National Safety Council
444 North Michigan Avenue
Chicago, Illinois 60611

National Society to Prevent Blindness
79 Madison Avenue
New York, New York 10016

Planned Parenthood Federation of America, Inc.
810 Seventh Avenue
New York, New York 10019

Poison Control Branch
Food and Drug Administration
5600 Fishers Lane, HFN-720
Rockville, Maryland 20857

President's Council on Physical Fitness and Sports
450 5th St., N.W., Suite 7103
Washington, D.C. 20001

Society for Nutrition Education
1736 Franklin Street, 9th Floor
Oakland, California 94612

Society of State Directors of
Health, Physical Education
and Recreation
9805 Hillridge Drive
Kensington, Maryland 20895

United Cerebral Palsy Associations
66 East 34th Street
New York, New York 10016

U.S. Department of Agriculture
Food and Nutrition Service
14th St. and Independence Avenue S.W.
Washington, D.C. 20250

U.S. Office of Cancer Communications
National Cancer Institute
Cancer Information Service
Bldg. 31, Room 10A-18
9000 Rockville Pike
Bethesda, Maryland 20205

U.S. Office of Disease Prevention
and Health Promotion
Department of Health and Human Services
Switzer Bldg., Room 2132
330 "C" St., S.W.
Washington, D.C. 20201

U.S. Office on Smoking and Health
Technical Information Center
Park Building, Room 110
5600 Fishers Lane
Rockville, Maryland 20857

Financial resources are also available from both the private and public sectors for promoting school health. Organizations, such as the Robert Wood Johnson Foundation in Princeton, New Jersey and Metropolitan Life Foundation in New York, New York, sponsor a variety of school health activities. There are also materials available to help you to locate funds. Here is one we particularly recommend:

Office of Disease Prevention and Health Promotion. (1984, January). Locating funds for health promotion projects. Washington, DC: U.S. Department of Health and Human Services. Available from: Information Specialist, National Health Information Clearinghouse, P.O. Box 1133, Washington, DC 20013-1133. No charge.

This paper discusses where and how to look for health promotion funds, lists major private and public foundations and agencies to contact, and describes resources--organizations, publications and data bases--that can be useful in seeking funds. This should be useful to the ambitious reader/fund raiser.

D. Do you know what questions you want the evaluation to address?

Evaluation is a process of gathering useful information to help make decisions. To plan an evaluation of school health, we need to know what the decisions are to be addressed by the evaluation. If we are going to look for answers, we need to know what the questions are. In assessing any school health effort, as well as in planning new health activities, four questions are critical: Do we want to do the activity? Can we do it? Were we able to implement the activity? Was the activity effective? These four questions can be categorized under the qualitative headings of (1) desirability, (2) feasibility, (3) fidelity, and (4) effectiveness. To elaborate, your evaluation questions should fall into the following categories:

Planning school health evaluation calls for asking the right questions.

- Desirability measures the value or merit of an activity. Is it something the school should be doing? Is it important? What indication do we have of its importance?

- Feasibility measures the sufficiency of resources available for implementing an activity. Is this something the school could be doing?

- Fidelity is concerned with the extent to which the activity is carried out as intended. Is this something the school was able to do?

- Effectiveness is concerned with the extent to which the activity achieves the desired outcomes. Was it something of benefit to the school?

These four essential questions relating to desirability, feasibility, fidelity and effectiveness are the foundation of our approach to evaluation, and they form the basic structure of this manual. Our approach assumes that student outcomes should relate

to health activities, health activities should directly relate to initial plans, and plans should be based upon purposeful, desirable goals. We recommend addressing these questions in order, from desirability to effectiveness. Here's why:

Before an activity can be considered for implementation, it must be desirable. It must reflect some goal or purpose which we value as a society. Otherwise, there is no point in considering it further.

If an activity seems desirable, it makes sense to ask whether it is feasible. Is it something we can realistically accomplish? For example, a very low student-teacher ratio may be desirable, but it simply is not feasible in most schools. An activity that is feasible can be described in explicit terms and outlined step by step. Once we say an activity can be done, we must be prepared to explain how it can be done.

Next, we should consider fidelity. Once up and running, were we able to actually do things in the way we first intended? If we don't successfully implement school health activities, then perhaps the activity was not realistic or well planned, or staff were inadequately trained. If a plan is not implemented as intended, it's meaningless to check for student outcomes.

Finally, we must look at effectiveness. This characteristic is the focus of most evaluations. However, if you have an activity that is not desirable, nor feasible, nor carried out as

intended, it is pointless to criticize it as ineffective. Effectiveness is a critical question to answer--once the first three questions are satisfied. In order to be considered effective, an activity must yield observable and measureable benefits.

To answer these four major evaluation questions, a comparison is made to a standard. For example, if we want to know about the desirability of a school health goal, we can use state regulations, community opinion and local statistical data as standards for comparison.

Table 2 summarizes the steps and standards in the evaluation process.

Table 2

Evaluation Components

hen	Decision	Evaluative Question	Evaluation Step	Standards of Comparison
ore lementation	Desirability	Should we do it?	Needs assessment	Community values, policy mandates, and professional/technical advances.
ore lementation	Feasibility	Can we do it?	Planning	School time, resources and commitment available.
ing lementation	Fidelity	Did we do it?	Monitoring	Procedures, cost and timeline specified in plan.
er lementation	Effectiveness	Was it beneficial?	Impact assessment	Desired goals and objectives.

When, why and how evaluation occurs. In this model, evaluation is done before, during and after an activity. It involves more than just assessing outcomes. It also includes setting priorities, planning activities and monitoring those activities on an ongoing basis.

A school health activity can be evaluated regardless of its current status--whether the program is just now being planned, is in the process of being implemented, or has been functioning for some time. Evaluation is useful at every stage of programming because it gives you the power of informed decisionmaking.

Now it is time to decide what evaluative questions should be posed of the school's health promotion efforts. The questions will provide a focus to the evaluation and enable you to match the appropriate evaluation methods to their respective purposes:

Evaluation gives the power of informed decision making.

1. Do you know what your staff, students and their parents consider to be primary health concerns?

   Although each community holds different perspectives about what's important to physical, emotional and social health, a recent survey indicates that these topics are of major concern to most parents and students: No. 1, personal health, including grooming, exercise, and sleep; No. 2, use of drugs, alcohol, and tobacco; No. 3, mental health, including self-respect and expression of feelings; and, No. 4, nutrition (Connell, et al., 1985). Health instruction and other school health activities should address current local health issues and topics that are of high priority to students. Do yours?

   The procedures outlined in Chapter II, beginning on page 36 will help you and your school health team determine desirable school health goals.

2. How realistic are your current health goals?

   Frequently, we become so enthusiastic in establishing health goals for students, staff and the school environment that we develop unrealistic expectations.

As an example, based on the talents and resources available, what health services could we reasonably expect of the school nurse? In evaluating planned goals, ask yourself: Are health activities clearly and realistically described? Is the school actually capable of accomplishing these goals? Are there sufficient resources--time, staff and money--to implement these goals? Chapter III, beginning on page 71, describes steps for assessing the feasibility of school health plans.

3. What health activities are actually being implemented?

Districts frequently adopt new health curricula, provide the materials to teachers, and assume they are effectively used. Instead, the materials often are shelved, and the instructional activities never implemented. Remember, what is planned may not be what actually occurs. Do you know what activities were actually carried out? Chapter IV, beginning on page 97, provides methods for determining the fidelity of school health activities.

4. How effective are present school health activities?

School health activities are of little merit unless they are capable of changing students' knowledge, attitudes and behaviors in positive ways. Although assessing effectiveness is no easy task, it is an essential step for judging the benefit of the school health activities. Chapter V, beginning on page 172, outlines alternative methods for evaluating effectiveness.

On the following page is a chart to help you formulate and organize evaluation questions for your school's health efforts. We encourage you to discuss it with the staff, fill it out and give it to your school health team as their initial assignment.

WRITE DOWN YOUR EVALUATION QUESTIONS HERE
IN THE APPROPRIATE BOX(ES)

	Health Services	Health Instruction	Social/Physical Environment
uld we in this ealth area?			
listic are ls for school in this area?			
school activities y being nted as d?			
school health les result desired s?			

E. Have you established a school health team?

A team approach is recommended for conducting the evaluation of the school health activities. Since the responsibility for school health is shared by all staff, a team can provide representation from various segments of the school staff. A multidisciplinary team allows members to:

- Review the school's major health concerns relevant to curriculum, services and environment, and plan integrated priorities.
- Participate in cooperatively assessing school and community needs, and comparing those to current school offerings.
- Share responsibility for improvement, acquire ownership in the health promotion effort, and increase visibility for school health efforts.

Widespread representation from school and community ensures some diversity in perspectives. Team members learn from one another, expand their own insights and pool expertise, all of which increase the chance that identified goals will be met.

The school health team involves school and community members working together.

In addition, the effectiveness and success of the school health activities can be maximized by attaining common agreement about (1) the scope of school health promotion, (2) its place and role within overall community health efforts, and (3) the importance of maintaining "consistent cooperation" during the planning and implementation of the activities (Wold, 1982).

Collaboration among school health professionals, other school representatives and community health providers allows the school and community to provide a broader and more knowledgeable base to plan, improve and evaluate local school efforts. Although not

necessarily easy to achieve, this cooperative effort can reduce fragmentation of health care, decrease duplication of services, increase cost-effectiveness, enhance relationships and mutual understanding among school and community groups, and provide "continuous, comprehensive, and effective health care for the school population" (Wold, 1982).

Even though primary responsibility for planning and review falls to the school's health team, all staff must feel ownership for the school health activities. One way to help engender this feeling of ownership is to involve all school staff in the nomination and selection of team members. In selecting team members, consider the following qualities:

1) Members must have a history of good follow-through on assigned tasks. They do not "drop the ball."

2) Members must be respected by their peers as leaders.

3) Members should be analytical--able to relate details to a larger context.

4) Members should demonstrate a personal and professional interest in and commitment to health.

5) Members must be willing to adopt a total school perspective and take responsibility for improving school health activities.

The team certainly should consist of at least five members and probably no more than ten members. All school staff, secondary students, parents and community health professionals should be considered for the team. Generally an administrator,

school nurse and health teacher are represented on the team. The administrator should be an advocate of school health, since administrative decisionmaking responsibility can make or break your efforts.

Once the team has been established, they must be given clear expectations about their role in improving school health, the appropriate evaluation methods at their disposal and their general time schedule for completing tasks each year.

Because the evaluation of school health is a continuous process, your school health team should be a permanent fixture. The team should be realistic in their expectations. A reasonable amount of time and energy will need to be devoted toward promoting health in the school, including an emphasis on evaluation. Begin with the evaluation questions which were posed at the conclusion of the preceeding section. To take a school health activity through all four steps in the evaluation process would take about 18 months. A new health area could be added each year, so that there would be continuous overlap in the process.

Clear and realistic roles, tasks and timelines enhance team effectiveness.

Table 3 provides a timeline for the entire process, which includes a number of tasks. However, most of these tasks can be delegated to individual team members. We recommend that the team needs to meet at least five times each year. (Because the evaluation is an ongoing process, there will be overlap in the meetings regarding proposed and ongoing activities

for any given year; thus, the schedule covers more than a year's time.)

1. In January, the team gets together to review the evaluation questions posed in the previous section and plan their approach. At this point they should read the entire manual.

2. In April, the team meets to review the results of the first phase of the effort--determining the desirability of school health activities.

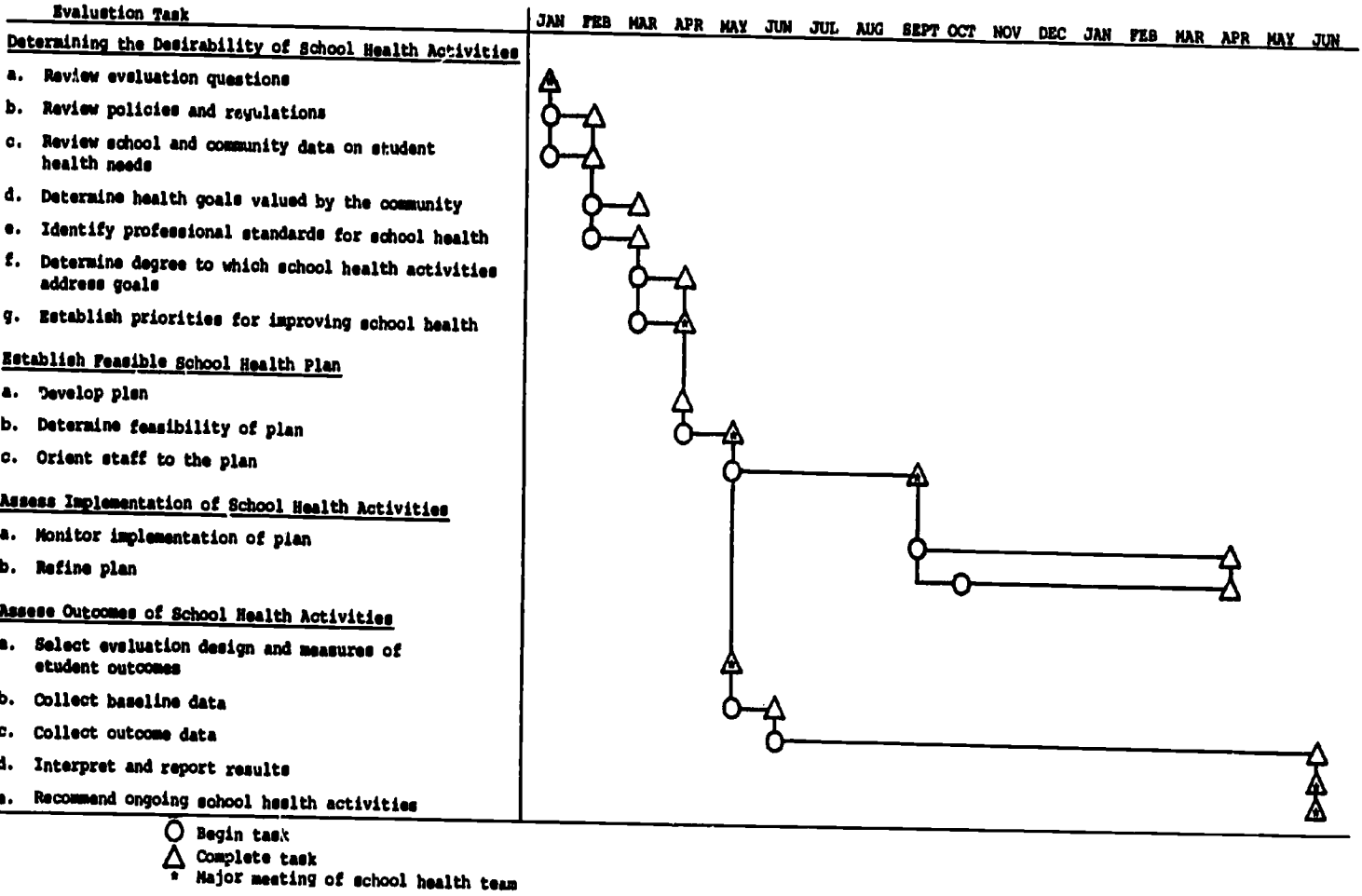
3. In May, the team completes the development of a feasible plan for next year's health activities and a plan for evaluating the effectiveness of those activities.

4. In September, they assist in orienting the staff to the plan.

5. The following June, the team meets to synthesize the results of the evaluation, report the results and recommend ongoing school health activities.

Keep in mind that this timeline pertains to individual activities within the overall school health plan. The amount of time allotted is appropriate for these relatively small-scale activities--implementing a new preschool health screening program, for example. The time allotments displayed would not be adequate if the school were seeking to bring about global changes. It is not recommended that schools launch complete, radical change efforts; but if this were to be undertaken, a much more generous timeline than that displayed in Table 3 would need to be developed.

Table 3
General Timeline for Evaluating A School Health Activity



Is your team ready to go? While this manual focuses on the nature and process of evaluation, there are several additional resource materials that the team members may find useful to assist them with more technical aspects of evaluation:

Bland, C.J., Ullian, J.A., & Froberg, D.G. (1984, March). User-centered evaluation. Evaluation and the Health Professions, 7, 53-63.

The authors offer a succinct, practical evaluation strategy to increase the effectiveness of everyday decisions and the usability of evaluation results.

California State Department of Education. (1979). Program evaluator's guide (2nd ed.). Princeton, NJ: Educational Testing Service. (ED 142 563). Available from: ERIC Document Reproduction Service, 3900 Wheeler Ave., Alexandria, VA 22309.

Designed as an inservice guide, this publication provides a thorough introduction to the purposes and uses of evaluation, the distinctions between individual and program evaluation, and the three kinds of evaluation data.

Fink, A., & Kosecoff, J. (1978). An evaluation primer. Washington, DC: Capitol Publications. Available from: Sage Publications, Inc. 275 S. Beverly Dr., Beverly Hills, CA 90212. Price: $12.50.

This very readable step-by-step guide to conducting program evaluations includes a useful introduction to the purposes and value of evaluation. Many evaluation examples from school health and community health settings are also included.

CHAPTER II

How to Determine Desirable School Health Goals

The first phase of the evaluation process is to determine what the school should be doing about health. Are there goals for school health? Why are these goals important? What health activities and philosophies do we value as educators? As members of society? What functions should be performed by the school? We must answer these questions in several ways, using different sources of information.

The school does not function in isolation. It is part of a larger social network that includes (a) regulatory and service agencies, (b) parents and the community, and (c) health professionals represented within the school and community. Each of these sources should be questioned about the desired health goals of the school. In Chapter I it was noted that evaluation involves the use of standards of comparison. In this phase of the evaluation, we want to compare our current school health goals against four sets of standards:

1. Mandates of regulatory agencies
2. Student health needs documented in the area
3. Values expressed by the local community
4. Standards advocated by professional organizations

Information for setting school health goals comes from school, community and outside sources.

Regulatory and service agencies, the first source of information, are guided by administrative mandates. That is, laws, statutes and policies require that schools perform certain services, or function in a certain manner. As an example, some laws specify school immunization requirements.

Compliance with regulation may not seem an innovative approach to school health, but it ensures that desirability standards are at least met at a minimum.

The second source of information is from local state and federal health agencies which compile information on the health needs of school-age children. What are the leading causes of death for students and adults in your area? What are the most common health problems of students in your locale? Answers to these questions should be considered in planning school health goals.

Third, each community has a unique set of values which should be reflected in the school program. Health issues, in particular, are value-laden, since they may address human rights, moral, ethical and cultural considerations. As an example, in many communities the issue of sex education in health classes has been vigorously debated. Parents, health professionals in the community, students and school staff all need a voice in determining what attitudes, values and practices a school will promote.

Fourth, we need to hear from the professional and technical community whose leadership is reflected in the wide range of technical advances now common in our schools. The current emphasis on wellness and personal health management is an example of one of those advances. A number of professional associations and voluntary agencies promote school improvements. Their standards and procedures for furthering school health offer a valuable source of information.

This chapter covers the six steps for determining the desirability of school health goals. It begins with the identification of goals currently held for school health and then defines the methods for identifying various standards for evaluating the desirability of these goals. The process concludes with the establishment of new goals for improving school health. Table 4 provides an overview of the process.

Table 4

Determining the Desirability of School Health Goals

Questions	Source of Information	Method for Collecting Information
What health goals does the school currently hold?	Current school policies, services, curriculum and activities	Describe current goals and efforts in school health.
What do regulatory mandates require that we do?	State administrative agencies, including the Department of Health and Department of Education.	Review regulations and guidelines in consultation with state and local regulatory and service agencies.
What health needs encountered by students should be addressed by the school?	Local, state and federal health agencies of vital and health statistics	Contact state and local agencies for reports of mortality and health problems of school-age youth.
What does the community say we should be doing?	Parents, community members, students and school personnel	Survey of health-related priorities for the scho l. Focus groups/public hearings to discuss issues and priorities.
What professional and technical standards enable us to further promote health?	State and local service agencies, education and health associations and voluntary agencies	Review professional literature and conduct discussions with professional associates.
Based upon regulatory requirements, vital statistics, community values and professional advances, what should we be doing differently in the school?	Local school decision makers	Set priorities with school board, school administration and staff in assigned activity areas.

A. Does the school have health goals?

What is the school currently doing to promote the health of students and staff? Are these activities guided by written plans and policies, or do they "just happen?" Your school district may currently have written goals for school health or it may not. To find out, determine if there are written goals and objectives for health education as part of the district's adopted curricular scope and sequence. Are there written goals and standards for the school nurse? How about school safety? Most likely, the team will find "bits and pieces" of school health goals in various school documents, such as policy manuals, job descriptions and curriculum guides. These need to be collected and compiled into a single document and organized around a common framework. Your state department of health and state department of education may have a set of recommended goals and objectives which could be used to provide the framework. Here is an example of a set of school health goals developed by one state agency.

School documents and outside agencies provide information for setting school health goals.

Healthy Independent School District

- HEALTH SERVICES
- HEALTH EDUCATION
- SCHOOL ENVIRONMENT

Healthy, Texas

Goals for a School Health Program

1. To augment health instruction which guides students toward reaching full capacity as individuals who make responsible decisions about personal, family, and community health.
2. To advocate and help provide an environment conducive to the promotion and maintenance of health.
3. To detect and to provide nursing care for any physical condition which impedes learning or threatens optimum health. (Nursing care is defined as assessment, intervention, counseling, and/or referral of any physical conditions.)
4. To provide liaison among the school, home, community agencies, physicians, and other health personnel.
5. To provide a physical, mental, and emotional health advocate for children within the school.
6. To achieve acceptable levels of compliance with federal, state, and local health regulations.
7. To maintain and utilize current individual and collective health data.
8. To provide learning and growth experiences for staff members.
9. To evaluate the program's effectiveness.

From: Texas Education Agency. (1984, August). School nurse handbook for the school health program. (rev. ed.) Austin, TX: Texas Education Agency. Available from: Publications Distribution Office, Texas Education Agency, 201 East 11th Street, Austin, Texas 78701. Price: $4.00.

The team may find it useful to organize the goals according to health services, health education and school environment, which is a commonly used framework. For example, Minnesota uses a two-dimensional framework for organizing school health goals, with the service, education and environment triad on one dimension and the nature of service on the other. The framework is displayed in Table 5 beginning on page 44. As you can see, this listing is written at a more specific level of detail than the general goals provided in the Texas listing. The level of detail used to express your own goals will depend upon the specificity of the expectations your school wishes to address.

Services, education and environment are useful categories for organizing goals.

The purpose of this step is to establish a tentative set of goals for school health which adequately reflects your current school operation. This can be done by either adopting an existing set of goals or deriving goals from your own school system. This will be a preliminary set to work on, so they need not be perfect. But they will provide a foundation from which to work in completing the remaining steps in this chapter.

Here are the tasks which need to be completed. Fill out the timeline and delegate the responsibilities to the various team members.

Task	Person Responsible	Deadline for Completion
a. Review school documents to identify existing goals and objectives.		
b. Contact state department of education and state department of health to identify recommended goals and objectives.		
c. Select a framework for organizing the goals.		
d. Draft a preliminary set of goals.		

Table 5

Goals of School Health Promotion

	INTERVENTION (Identify and provide services for emerging health problems)	PREVENTION (Minimize the likelihood that specific health problems will occur)	PROMOTION (Enhance healthy lifestyles)
A. HEALTH SERVICES	1. Have counseling personnel qualified to respond to behavior concerns. 2. Have the capability to provide basic emergency care. 3. Have personnel to make referral for physical and emotional problems and follow-up care. 4. Have direct and immediate access to community physical and mental health resources. 5. Provide aftercare attention and support for those students returning from absences. 6. Have personnel to perform medically prescribed treatments and personal care procedures. 7. Provide counseling and program resources for students with special health needs. 8. Provide health counseling for students and their parents emphasizing self-care. 9. Provide an ongoing surveillance system for communicable diseases.	1. Provide periodic assessments of students' health status. 2. Provide re-screening and follow-up for those students who have been referred. 3. Provide access to health care professionals. 4. Provide immunization clinics in accordance with approved school policy. 5. Have a fluoride rinse program available for students in areas where water fluoridation does not exist.	1. Provide health information that includes an emphasis upon personal responsibility for health maintenance and lifestyle practices. 2. Provide for periodic physical assessments which include information related to food intake, body measurements and vital signs.

Table 5 (Continued)

Goals of School Health Promotion

	INTERVENTION (Identify and provide services for emerging health problems)	PREVENTION (Minimize the likelihood that specific health problems will occur)	PROMOTION (Enhance healthy lifestyles)
B. HEALTH INSTRUCTION	1. Provide curricular instruction that addresses health problem identification and intervention. 2. Provide special tutoring services for those students who are returning from absences. 3. Provide educational services to pregnant students and student parents to assist them in completing their high school education.	1. Implement a personal health curriculum. 2. Implement a nutrition curriculum. 3. Implement a dental health curriculum. 4. Implement a sexual health curriculum. 5. Implement age-appropriate curriculum for childbearing and child rearing. 6. Implement a chemical health curriculum. 7. Implement a safety education curriculum.	1. Develop and implement a mental health education curriculum. 2. Provide a nutrition education curriculum which emphasizes student knowledge and skills in diet selection. 3. Provide opportunitites for students to observe and participate in child care. 4. Develop and implement a consumer health education curriculum.

Table 5 (Continued)

Goals of School Health Promotion

	INTERVENTION (Identify and provide services for emerging health problems)	PREVENTION (Minimize the likelihood that specific health problems will occur)	PROMOTION (Enhance healthy lifestyles)
C. SCHOOL POLICY AND ENVIRONMENT	1. Have a written, approved and implemented student assistance process for dealing with observed behaviors of concern. 2. Have formal communications established with community-based health and human services providers and law enforcement agencies. 3. Have procedures that indicate the role of parent or family involvement in student health problems. 4. Have a disseminated plan for responding to natural disasters and other crisis situations. 5. Have procedures for the administration of medications to students or self-medication by staff or students. 6. Have procedures to follow when staff or students use chemicals inappropriately or illegally while on school property. 7. Have policies regarding the school's responsibility in responding to communicable diseases. 8. Have a written, approved and implemented employee assistance process for dealing with behaviors of concern. 9. Have procedures for identifying and eliminating the dangers associated with asbestos and other hazardous materials on the school premises.	1. Provide staff training in areas of comprehensive school health. 2. Have a policy for accident prevention. 3. Have policies outlining school responsibility for the provision of: o screening programs o comprehensive K-12 health education curricula o counseling and referral services	1. Establish an emotionally healthy environment which includes communication among administrators, staff, parents and students. 2. Provide for all students to participate in healthful daily physical activity. 3. Provide for a student's self-development and creativity. 4. Implement a policy regarding the kinds of food (including snack foods) to be sold or served which meet the meal pattern requirements of the school lunch program and which support by example the nutrition curriculum. 5. Have facilities available to support the healthy growth and development of students.

Adapted from: Interdepartmental Task Force of the Minnesota Education, Health and Public Welfare Depsrtment. (1981, Fall). Health promotion through the schools. St. Paul, MN: Minnesota Education, Health and Public Welfare Department. Available from: Pupil Personnel Services, Minnesota Department of Education, Capitol Square Building, 550 Cedar Street, St. Paul, MN 55101, Attention: Carolyn Robinson. No charge.

B. Do you know what school health activities are mandated in your state?

Schools are regulated by a wide range of state and local policy mandates. Many of these regulations have direct bearing on the role of the school in promoting health. For example, when Dellinger (1983) reviewed legal issues in school health in North Carolina, she found a variety of laws and policies pertaining to these health-related issues:

a. Health education

b. Immunization

c. Fitness to attend school

d. Fitness to participate in strenuous activities

e. Communicable diseases and reporting of their incidence

f. Child abuse and neglect

g. Pregnancy

h. Substance abuse and the school's role in imposing discipline, calling in law enforcement authorities, and counseling the student about the consequences of substance abuse

i. Sexually transmitted diseases

j. Health counseling

k. Recordkeeping and the Family Educational Rights and Privacy Act

In addition, Dellinger found school health standards relating to, among other issues, transportation of students requiring immediate medical attention, exclusion of students who pose a health risk to others, and the educational rights of children with special health needs.

Policies governing the school's role and responsibility for student health are numerous and complex. Identifying them can be an arduous, time consuming task--but it is a critical one.

Generally, schools are periodically inspected by various education, health, transportation, labor and public safety agencies. However, school improvement efforts should be beyond the minimum acceptable levels of performance. Only then can we say with some assurance that a school has identified health as a priority.

Again a framework may be helpful for organizing the various regulations of state agencies dealing with school health. The health service-education-environment triad should be helpful. Here's an example of some state laws that affect various components of school health:

Health Services	Health Education	School Environment
Audiometric use and registration	Credit requirements for graduation	Architectural barriers to the handicapped
Child abuse reporting	Recommended scope and sequence	Free and reduced lunch and breakfast programs
Communicable disease prevention	Teacher certification requirements	Use of protective eye devices
Nurse certification requirements	Services to handicapped children	Fire escapes
Immunization requirements		Sanitation of facilities
Administration of medication		Operation and maintenance of buses
Consent for medical treatment		
Screening for communication disorders		

Here are the tasks which need to be completed. Fill out the timeline and delegate the responsibilities to the various team members.

Task	Person Responsible	Deadline for Completion
a. Contact state department of education and state department of health to request regulations affecting school health.		
b. Organize the various regulations to correspond to the various tentative goals for school health.		
c. Note where goals need to be added or refined to address regulations.		

C. Have you looked at school and community data about student health needs?

Since each school system serves a unique community, the health problems and needs of the students may differ. Many of these health needs should be taken into account in setting goals for school health. There are at least three types of information which could be useful for schools in setting health goals:

1. The mortality rates of school-age children and the causes of death. For example, did you know that accidents accounted for 51 percent of the deaths of children age 5-14 in the United States in 1978? More than one-fourth of these deaths were caused by motor vehicle accidents (U.S. Public Health Service, 1981).

2. The incidence and prevalence of diseases and disabilities in school-age children. Information about the incidence of major diseases, accidental injuries and other health problems, such as tooth decay, vision problems, emotional disorders, drug abuse, sexual behavior and school crime, provide insight into the health needs in the local area.

3. The mortality rates of adults and the causes of death. What threats to health and well-being will the student encounter as he or she grows older? What steps can the school take to prepare students for a healthier life in their adult years?

School and community data help to identify local student health needs.

The availability of this information varies. Contact the vital statistics section of your state health department to determine what information is available in the state and whether this information is broken down by city, county or region. Your state health department may also be able to share with you information from the National Center for Health Statistics, which includes results of national surveys on personal health practices and the incidence of illness and injuries. Your state health department can also refer you to additional sources of information available from other offices in your state.

The purpose of this step in the process is to acquire "hard data" about the health needs of students. While it only provides an additional set of clues for determining desirable goals for school health, it is a source of evidence which should not be ignored.

The school district may also have health-related data available, such as absenteeism rates, accidents, substance abuse, teenage pregnancy and handicapping conditions. Do these data suggest an increase or decline in specific health needs over the years? How do findings in your school compare to other schools or the state as a whole? Are there positive steps the school can take to reduce these needs? Consider each set of data you have collected and try to answer the three preceeding questions. By doing so, the team can classify each potential need into one of three categories:(1) a major problem demanding immediate and intensive action, (2) a secondary problem that needs attention, and (3) not a problem at this time. Needs rated as a "1" or "2" can then be listed along with goals for their resolution. These goals can then be added to your tentative list of goals for school health developed in the previous two steps.

But how do you translate health needs into goals for school health? Excellent examples are contained in the U.S. Public Health Service (1980) document, Promoting Health, Preventing Disease: Objectives for the Nation. (Stock No. 017-001-00435-9). This report is available for $5.00 from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. The report contains a vast list

of national objectives for improving health by 1990. A large proportion of these objectives can be directly or indirectly influenced by the schools (Iverson and Kolbe, 1983). Here is an example of national objectives in the area of nutrition:

Resources can help schools translate health needs into goal statements.

- Increased public/professional awareness via school health education

  a. By 1990, the proportion of the population which is able to identify the principal dietary factors known or strongly suspected to be related to heart disease, should exceed 75 percent for each of the following diseases: heart disease, high blood pressure, dental caries and cancer.

  b. By 1990, 70 percent of adults should be able to identify the major foods which are: low in fat content, low in sodium content, high in calories, good sources of fiber.

  c. By 1990, 90 percent of adults should understand that to lose weight people must either consume foods that contain fewer calories or increase physical activity—or both.

  d. By 1990, all states should include nutrition education as part of required comprehensive school health education at elementary and secondary levels.

- Improved services/protection via efforts to ensure a healthy school environment

  By 1985, the proportion of employee and school cafeteria managers who are aware of, and actively promoting, USDA/DHHS dietary guidelines should be greater than 50 percent.

- Reduced risk factors that could be influenced by school health programs

  By 1990, the mean serum cholesterol level in chidren aged 1 to 14 should be at or below 150 mg/dl.

Here are the specific tasks to be completed in this section. Complete the activity plan by assigning responsibility and setting a schedule.

Task	Person Responsible	Deadline for Completion
a. Contact state health department to obtain available health statistics for state and local area.		
b. Identify health-related information routinely collected by school district.		
c. Compare local data to other areas, the state and/or past years to identify trends.		
d. Classify health needs by severity of problem.		
e. Translate priority needs into goals and add to tentative list of school health goals.		

D. Do you know what health goals are valued by your community?

What important health concerns do members of the school's community want to see the school address? The values and opinions of parents, staff, students and other community members are important in identifying desirable goals. In particular, their preferences may help you identify goals which focus on positive steps for promoting healthy behaviors.

The most common method of collecting information about the preferences of individuals is through the distribution of a written survey. But where do you get the questions to ask on the questionnaire? One approach is to begin the process with a public meeting, perhaps in conjunction with your local parent/teacher organization. During the meeting, health concerns can be discussed and listed as prospective goals for the school. This enables the team to use a survey based on issues identified at the local level.

Surveying can help identify priority health concerns of school and community.

The issues identified at the meeting can then be used as items on the survey. The survey can then be distributed to a representative sample of parents, school staff, students and other community members. The intent of the survey is to identify the importance of the health issue, not to rate the school's current success in addressing the need.

Remember that the specificity of the responses on a survey is largely dictated by the specificity of the questions. If you want to establish priorities for school health, don't ask questions about general educational issues. For example, asking

respondents to rate the importance of health instruction in relation to reading, science and mathematics will not give you any useful information regarding what health education should specifically entail. On the other hand, by asking respondents to rank various health education topics, such as personal health, nutrition, substance abuse and family life, you will get responses that are more useful in designing curriculum.

Community discussions and surveys should be structured; otherwise, you cannot be sure that sufficient consideration has been given to all fundamental issues. Earlier, we introduced the three components of school health: health services, health education and the school environment. Phrased as questions, they serve as a basis for outlining health concerns:

1. What responsibility should the school take for preventing and/or intervening in student's health problems?
2. What health concepts should the school teach students?
3. In what ways can the school protect students from harm and promote healthy behaviors?

Remind the meeting participants that school health activities should be concerned with students both in and out of the classroom setting.

An alternative to the public meeting is a survey developed from an existing set of health needs, goals or activities. For example, a staff survey for rating the importance of various health services is provided on the following page.

SURVEY OF THE IMPORTANCE OF HEALTH SERVICE FUNCTIONS

Service Area	Essential	Very Important	Important	Questionable	Not Important
1. Health information is obtained for all new students.	5	4	3	2	1
2. School personnel are notified by nurse of students with major or chronic health problems; followup is conducted to see that needs are meet.	5	4	3	2	1
3. Health screening program:					
Vision	5	4	3	2	1
Hearing	5	4	3	2	1
Scoliosis	5	4	3	2	1
Height and weight	5	4	3	2	1
Dental	5	4	3	2	1
4. Office personnel provide minor first aid and send sick students home.	5	4	3	2	1
5. School nurse provides minor first aid and sends sick students home.	5	4	3	2	1
6. School nurse has procedures for emergency medical care.	5	4	3	2	1
7. School nurse obtains health assessments on all students staffed by Handicapped Children's Education Act.	5	4	3	2	1
8. School nurse attends staffings for interpretation of student's health needs and their educational significance.	5	4	3	2	1
9. School nurse provides feedback to school personnel on their referrals.	5	4	3	2	1
10. School nurse makes home visits to students when health concerns indicate.	5	4	3	2	1

Adapted from: Health service interest and performance survey. (Not dated). Denver, CO: Colorado Department of Health, Community Nursing Section.

Service Area	Essential	Very Important	Important	Questionable	Not Important
11. School nurse counsels students for drug abuse, pregnancy, child abuse, unwed mothers, difficult home situations, etc.	5	4	3	2	1
12. School nurse counsels students for their health concerns and/or major health problems.	5	4	3	2	1
13. School nurse assists school personnel in developing health education curriculum.	5	4	3	2	1
14. School nurse assists in teaching health education in classroom.	5	4	3	2	1
15. A school nurse is present in each building while school is in session.	5	4	3	2	1
16. School nurse holds annual inservice with teachers on the role of the school nurse in dealing with health problems and emergencies at school.	5	4	3	2	1
17. School personnel are prepared to recognize signs of suspected communicable or nuisance diseases.	5	4	3	2	1
18. The school secretary or school health assistant takes responsibility for School Immunization Law initial paper work.	5	4	3	2	1
19. School nurse does followup on immunizations required for Immunization Law.	5	4	3	2	1
20. A school health office is available in every school.	5	4	3	2	1
21. Individual health records are available on all students.	5	4	3	2	1

Service Area	Essential	Very Important	Important	Questionable	Not Important
22. Privacy is assured for health assessments and counseling.	5	4	3	2	1
23. One cot is available for every 400 students.	5	4	3	2	1
24. Telephone is available for confidential health conversations.	5	4	3	2	1
25. Health assistants are available for minor first aid, School Immunization Law, basic screening, routine paper work.	5	4	3	2	1

A method that has been very successful for planning health curriculum involves questioning students about their health-related interests and concerns. For example, Sutherland (1979) asked junior high and senior high school students to list the questions which their friends had about ten health topics:

Gathering information on student health interests helps ensure relevance of program.

1. Community health
2. Consumer health
3. Diseases
4. Drugs, alcohol and tobacco
5. Ecology
6. Family life
7. Nutrition
8. Mental health
9. Personal health
10. Safety/first aid

It was found that the students indicated an interest in a wide range of health topics of direct concern to them as young adults. In this way curriculum content of direct relevance to students could be planned. The general approach is called "The Students Speak: Tell Us What We Want to Know," and is thoroughly described in Students Speak by Lucille Trucano, published in 1983 by the Division of Instructional Programs and Services, Office of the Superintendent of Public Instruction, Olympia, Washington. This resource is available from Comprehensive Health Education Foundation, 20832 Pacific Highway South, Seattle, WA 98188. The price is $5.95, plus shipping and handling (approximately $1.00 for individual copies).

Once the survey has been completed, the results can be tabulated to identify which health issues are most frequently rated as important. Critical health issues for which there is the greatest consensus can then be listed along with their corresponding goals in the school's tentative list of health goals developed in Chapter II A.

Here are the specific tasks to be completed in this step. But before you develop your schedule for completing these tasks, it is recommended that you review resource materials on the construction and use of surveys. If none are available in your school, consider Questionnaire Design and Use by Douglas R. Berdie and John F. Anderson, 1974. This is available from Scarecrow Press, Inc., P.O. Box 656, Metuchen, NJ 08840. The price is $13.00.

Task	Person Responsible	Deadline for Completion
a. Review resource materials for conducting surveys.		
b. Plan an approach for collecting community opinion.		
c. Design or adapt a questionnaire for conducting survey.		
d. Collect data from community (parents, school staff, students, etc.).		
e. Tabulate the results to identify health issues of greatest concern.		
f. List priority health issues and goals.		

E. Have you looked at professional standards in developing health goals?

There are several professional associations and agencies that advocate model standards for school health. These groups have established goals for school health that are considered desirable by the profession. For example, the American School Health Association has developed guidelines for health education programs. The document, entitled Health Instruction: Guidelines for Planning Health Education Programs K-12 was published in 1983 by Kendall/Hunt Publishing Company of Dubuque, Iowa. This is available from: American School Health Association, P.O. Box 708, Kent, Ohio 44240. The price is $7.95.

The American Nurses' Association organized a task force of representatives from the National Association of State School Nurse Consultants, American School Health Association, the Division on Community Health Nursing Practice and the Division of Maternal and Child Health Nursing Practice of the ANA, the National Association of Pediatric Nurse Associates and Public Health Nursing Section of the American Public Health Association. In 1983 the task force developed and adapted Standards of School Nursing Practice. The standards are available from the American Nurses Association, 2420 Pershing Road, Kansas City, Missouri 64108. The price is $2.00.

Professional associations and government agencies are helpful resources for determining local goals.

The State School Health Education Task Force of the Education Commission of the States developed a handbook for state policymakers in March 1981. The handbook provides recommended policy statements for school health education. The report,

entitled Recommendations for Schcol Health Education: A Handbook for State Policymakers (Report No. 156) may be obtained from: Publications Department, American Council of Life Insurance/Health Insurance Association of America, 1850 K Street N.W., Washington, DC 20006. Price: $1.00

Another association with policy recommendations for school health is the American Medical Association. Their legislative department prepared a Model Policy for Establishing a Comprehensive Health Program in Elementary and Secondary Schools (1976). It can be obtained from: Legislative Department, Division of Public Affairs, American Medial Association, 535 Dearborn Street, Chicago, Illinois 60610. There is no charge.

Here is an example of a model standard established for schools as part of community preventive health services.

GOAL: The school health program will be planned and implemented to ensure that each student and staff person is provided a healthful environment in which to work and study, together with needed preventive health services and health instruction.

OBJECTIVES	INDICATORS
1. By 19__ the official health agency or other appropriate governmental agency will ensure that necessary preventive health services for the school children are provided by the administration of the community schools, where services are not available, the appropriate governmental agency will provide them.	(a) Statement of common goals and relative responsibility adopted by the school system and the official health agency or other governmental agency. (b) Availability of preventive health services (e.g., immunization services).
2. By 19__ the school district will designate a responsible official or functioning unit from within the school district and/or official health agency staff to be responsible for the planning, implementation, and evaluation of the district's school health program.	Designated official or unit
3. By 19__ there will be a manual of policies governing the provision of health services (including health instruction) for each school in the community which has been approved by the responsible school administration and policy board.	Existence of manual

Excerpted from: Secretary of Health, Education and Welfare (1979, August). Model standards for community preventive health services. Washington, DC: Department of Health, Education and Welfare, p. 95. (NTIS # HRP 0904383). Available from: National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161. Price: $13.00.

Review the list of resource agencies and associations beginning on page 18. In particular, look for organizations that deal with aspects of school health you identified in the previous section as critical to your community. Once the model standards and guidelines have been collected, members of the team can select those goals that are most relevant to the school's needs.

Here are the tasks you need to plan in this section:

Task	Person Responsible	Deadl for Compl
a. Contact health resource organizations for recommended standards.		
b. Review standards and select those most appropriate to your school's needs.		

F. Have you established school health goals from needs data?

The process described in the previous five sections focuses upon the collection of information from a variety of sources. State agencies have been contacted to determine what aspects of school health are mandated by law. We know that the school is compelled to address these minimum requirements. Vital statistics information has been requested from the state health agency and collected from the school that provides evidence of student health needs. The opinions of parents, school staff, students, and other community members have been sought to aid in identifying health issues important to the school's community. Finally, information has been requested from professional associations and service organizations about which model standards for school health these groups advocate. How do we translate all this information into a desirable set of school health goals?

First, we need a framework to organize the information. For a start, we can organize the data within our three school health components--health services, health education and school environment. This will help reduce the information to manageable levels. The information collected in Step B (regulatory mandates), Step C (vital statistics), and Step D (community opinion) can then be listed for each school health component.

Here is a worksheet for listing the major findings from each step.

Organizing Information to Establish School Health Goals

Source of Information	Health Services	Health Education	Social/Physical Environment
the tentative initially blished for ol health.			
the key ts with n the ol must ly by law.			
the major th needs of ol-age dren in the ol health onent where an most opriately be essed.			
the health es rated as important by school's unity.			

Now that the information has been initially organized, the team needs to review and analyze each column (i.e., each of the three school health components) individually to look for common threads that will support further organization. How you organize the information really depends upon the team's perspective. The organizers could be based upon the roles of school personnel--who would be primarily responsible for implementing the goal. Or on the service strategy--intervention in health needs, prevention of health problems and promotion of healthy behaviors. Or on the student health dimension to be affected--emotional or physical. Another way of organizing the information would be under knowledge, attitudes, behavior and physical well-being. The main point is to make the organizational structure meaningful and useful to the school staff and community.

School health goals will pertain to health services, health education and the school environment.

Once your organizational structure is defined, information from all four rows can be lumped together. This involves combining and refining the information into a single set of goals through group discussions. The activity should conclude with one list of goals for health services, one for health education and one for the school environment.

Note that the information collected from Step E (professional standards) has not yet been added to the list of goals. Which of these standards you integrate into your set of goals really depends on the degree to which these standards are consistent with the school goals and are considered to be desirable, based on the information previously collected. That is, professional

standards are appropriate if they are relevant to the needs, philosophy and goals of the local school community. Pick and choose. Address those standards that are consistent with your school health goals.

This process of combining information to organize and establish a set of goals takes a lot of intuition, as well as analytical skill. The process may be frustrating because it is not simple and clear cut. There is, however, a way to determine when your goals are valid and appropriately organized.

To validate the goals, we work backwards from goals to problems, needs and preferences. For each goal, the team members should be able to answer this question: "Is this goal justified by policy mandates, community opinion, student health needs and/or professional standards?" Each goal must be supported by a set of needs data which provides the rationale for its importance. Essentially, the process involves reviewing evidence. An added bonus of this process is the fact it generates background information that can be provided to the school board for each goal when they are submitted by the district for formal adoption. Here is an example of a school health goal and its rationale.

Review of propoeed goals involves asking, "Is this goal justified...?"

Goal	Rationale
Students will make responsible choices in their personal nutrition habits.	Policy restricts the sale of cariogenic (high sugar) foods during lunch service in the school. Statistical data indicate 90 percent of the students in high school have decayed or missing teeth and more than one-fourth of the students are substantially overweight. Eighty percent of the parents and 92 percent of the teachers rated nutrition as an important topic for health education. When asked what they wanted to know about nutrition, the most frequent answer given by the junior high and senior high students was, "How do I decide what foods are good for me to eat?" Nutrition is recommended as one of ten content areas for health education by the ECS State School Health Education Task Force.

To assume that the goals for school health are adequately organized, the team needs to review each goal's level of generality. Are the goals mutually exclusive (not overlapping)? Do the goals cover all major areas of need in some consistent way? Are the goals all written at roughly equivalent levels of detail? If not, then some additional refinement is necessary.

The team should conclude this section with a set of desirable goals for school health, based upon local needs and preferences. These goals should then be submitted to the school board through the appropriate administrative channels of the district. Once the goals are adopted, the team can move on to Chapter III to plan feasible strategies for achieving the goals.

Adoption of goals completes this phase of effort.

In review, here are the tasks for completing this phase of the work:

Task	Person Responsible	Deadline for Completion
a. Organize information from steps A-D into list of possible goals.		
b. Convene team to review, organize and refine goals into a single list.		
c. Review professional standards (Step E) for inclusion in the list.		
d. Validate list of goals.		
e. Check organization of goals.		
f. Submit for the school board adoption.		

CHAPTER III

How to Establish Feasible School Health Plans

Through the steps outlined in the previous chapter, you can establish the desirability of your school's health promotion goals. Once school health goals have been adopted, we must find a way to determine how feasibly they can be carried out. The essential evaluation question to be answered here is, "Does the school have the commitment and capability to implement the health promotion activities it wants?" Answering this question requires carefully structured planning. There are five questions to be answered, each relating to one of the five steps that make up the planning process, as shown in Table 6. Answering these five questions helps ensure that your health promotion activities are of sufficient quality, scope and intensity to achieve your school's goals:

A five-step planning process is used to determine feasibility.

1. Is the school health plan clear and realistic?
2. Does your school health plan match your selected goals?
3. Is the school health plan organized in a meaningful way?
4. Have you identified resources to accomplish the plan?
5. Is there sufficient staff commitment to accomplish the plan?

Table 6

Determining Feasibility:
Steps for Planning School Health Improvement Activities

ep	Question	Source of Information	Method for Collecting Information	Result
1	Can the planned health promotion activities be clearly and realistically described?	School health improvement plan	Review of plan by school health improvement team for clarity. Use of checklists to ensure plan is complete.	A written description of each planned activity, expressed in clear language.
2	Are the elements of the planned activities congruent with the school improvement goals and priorities?	School health improvement plan and school health improvement goals from desirability assessment	Review and analysis of the elements of the plan by the school health improvement team.	A written description of each planned activity, consistently aligned with school goals.
3	Are the elements of the planned activities internally consistent?	School health improvement plan	Review and analysis of the elements of the plan by the school health improvement team.	A written description of each planned activity, organized in a logical and meaningful way.
4	Do sufficient resources exist to accomplish the activity?	School health improvement plan budget and availability of school resources	Cost analysis.	A budget for each planned activity which describes the needed and available resources for completing each task.
5	Does sufficient staff commitment exist to undertake the activity?	School staff and administration	Staff meetings and discussions with school administration.	A written resolution and/or statement of administrative support to commit time and resources to the planned activities.

Step 1 requires that you put your intended health improvement activities down on paper in a clear, understandable manner. Step 2 asks that you check to determine whether your planned activities dovetail with the school health promotion goals. Similarly, Step 3 calls for an internal check to see how well the components of the plan fit together. Step 4 requires you to assess the degree to which your school is "ready, willing and able" to undertake the planned activities. Finally, Step 5 asks that you determine the adequacy of your school's resources to accomplish the plan.

"Evaluability assessment" calls for detailed program description.

These steps may not sound like traditional evaluation methods; yet they are essential to the evaluation process because they require complete understanding and documentation of every activity proposed. Schmidt, Scanlon & Bell (1979) describe a process called evaluability assessment. This process calls for a program description that is (a) complete, (b) acceptable to decision makers, (c) realistic, (d) plausible, and (e) guided by evaluation evidence that can be reliably and feasibly collected. They point out that the merits of a program cannot be documented if the program itself cannot be accurately described.

A. Is the school health plan clear and realistic?

If you do not know where you are going, how will you know when you get there? A written school health plan provides direction for achieving the school health goals. The plan will be used to monitor school activities and to set criteria for assessing their effectiveness in achieving the school health goals. While the health goals define purpose, the plan details the activities for accomplishing that purpose.

In the school setting, written plans are particularly important because of shared responsibilities. Plans help ensure that everyone understands what is intended, and approaches each goal in a consistent way over time. In addition, written plans give us a basis for making changes and gauging our success.

What does a clear and realistic plan look like? First, it should be sufficiently detailed to show the reader why, how, when, and by whom activities will be accomplished. Second, it must be practical enough to persuade readers that in all likelihood the proposed activities can be accomplished in your school.

Health education has been severely criticized for not establishing realistic plans. For example, Allanson (1981) commented that "Many school health education programs are little more than gimmicks, and the initial response is enthusiastic until the novelty wears off." Similarly, Carlyon, in her Physicians' Guide to the School Health Curriculum Process (1980),

identified five pitfalls to planning effective school health promotion activities:

1. Placing the health curriculum in direct competition with other basic skills.
2. Establishing unrealistic objectives for the program, expecting health education to change students' health status and behavior.
3. Adopting packaged programs as a "quick fix."
4. Failing to plan for the integration of health curriculum, especially through teacher training.
5. Expecting legislative mandates for school health to guarantee quality programs.

Kreuter and Green (1978) describe the problem in still another way: "While there is evidence that health behavior change is a feasible and appropriate evaluative criterion for patient and community health education, practically no such evidence exists for health education in the school.... Recognizing the present classroom limitations of health education in most schools, we would do well not to infer cause when the behavior is remote."[3] In other words, let us be cautious about the benefits we attribute to our program.

Realistic plans specify results, have measurable goals, are achievable.

Realistic plans have three common characteristics. First, their intended outcomes are direct and immediate. Objectives are stated in terms of the specific results which will be evident at the conclusion of each activity. Second, there is a balance between the level of expected results and level of intended effort. You get what you pay for. Dramatic change is not

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brought about by one-shot, short-term activities. Third, realistic plans are achievable, given a reasonable commitment of time, energy and other resources. They are not so ambitious that they either consume an inordinate amount of the school's resources, or so intensely focused on one set of activities that other school functions suffer.

In building a plan, we move from goals to strategies to objectives to activities. A strategy is the general approach that will be used to achieve the goal. In Chapter I, four school resources were described for achieving school health goals--policy, staff, curriculum and facilities. The school health improvement strategy will indicate how these four resources are used.

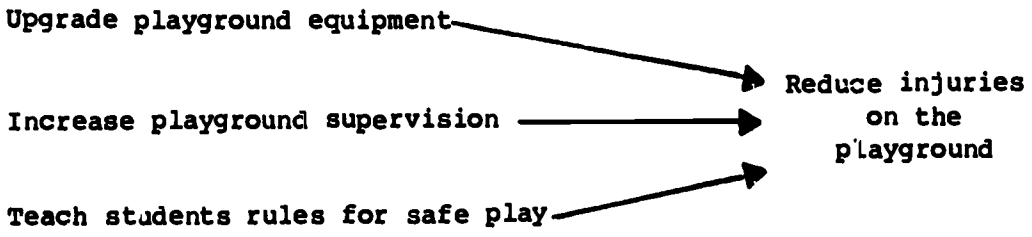
Objectives define the outcomes expected from each strategy. They are usually defined in terms of students' knowledge, attitudes or behavior. Activities detail the specific tasks, responsibilities and timelines for implementing the strategy.

Identifying cause and effect helps schools develop strategies to achieve health goals.

How do you develop a strategy for achieving a school health goal? One way is to conduct a problem analysis. Problem analysis involves the systematic identification of cause and effect relationships. It is not as sophisticated as it sounds. Have the team look at a school health goal. Then pose the question, "What would the students have to do differently for that goal to be achieved?" Then ask, "What could the school do to bring about those changes in students?" Then ask, "What specifically would enable the school to do this?" Finally, ask "How would the four school resources be used to accomplish this?"

Be creative in your thinking. Consider activities both inside and outside the classroom. Think about ways all school staff, both certified and classified, can contribute to the achievement of the goal.

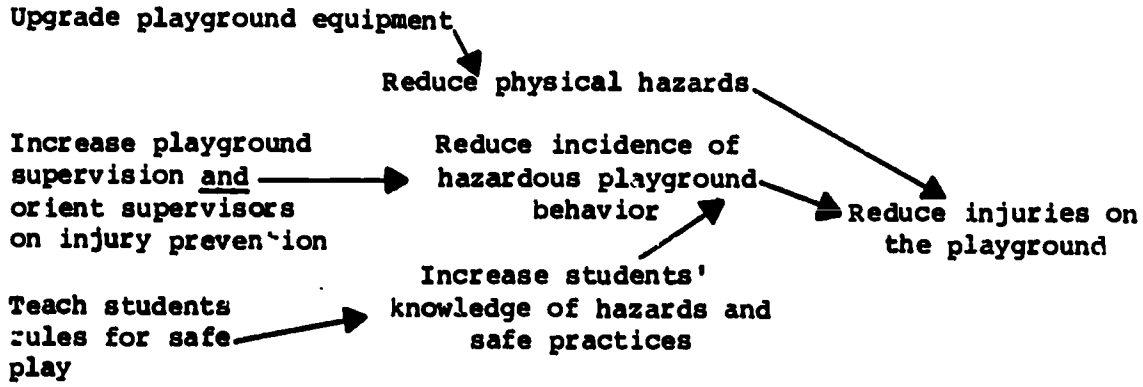
For example, let us say we want to reduce injuries on the playground. That is a goal of our school health plan. We are going to use three strategies that will, we hope, achieve the goal; upgrade the playground equipment, increase supervision, and teach students rules for safe play. If we diagrammed our problem analysis, it might look like this:



But, there is something missing. How do we <u>really</u> know that these three strategies will reduce playground injuries? There must be a causal link which tells us so. Upgrading playground equipment will only reduce injuries if the equipment becomes less hazardous. So, we could check for physical hazards (sharp corners, exposed moving parts, hard surfaces, etc.). Increasing supervision of the playground will reduce injuries only if supervisors are oriented to preventing injury, not just intervening once an injury occurs. So, we could train supervisors to recognize and prevent hazardous playground

behavior. Finally, teaching students the rules of safe play can only reduce playground injuries if students learn and apply those rules. So, we could test students' knowledge of the rules and observe their practice on the playground.

Now here is what our problem analysis diagram looks like:



What the map tells us is that we can trace and evaluate seven points, not just four. It also gives us clues about which relationships are stronger and which are more tenuous. Finally, if we do decide to evaluate all seven points, it may help us determine which strategies seem to work best. The map is a tool for testing our thinking and identifying reasonable points at which evaluation should occur.

Resource materials offer ideas for schools to consider in selecting/ developing strategies.

The second (and complementary) way to develop strategies is to adopt those which have been proven successful elsewhere. Why reinvent the wheel? Let's look at some potential resources for identifying strategies for school health. Many of the resource materials deal with health education programs objectives and

materials. Here is a list of readily available materials you should find particularly useful:

American School Health Association. (1983). Health instruction: Guidelines for planning health education programs. Kent, OH: American School Health Association. Available from: American School Health Association, P.O. Box 708, Kent, OH 44240. Price: $7.95.

Goals, concepts and organizational issues including learning activities to assist in local curriculum planning are provided in this document. Nine health ideas are included. This resource should be helpful in designing or redesigning health programs.

California State Department of Education. (1978). Health instruction framework for California public schools. Sacramento, CA: California State Department of Education. (ED 152 710). Available from: ERIC Document Reproduction Service, 3900 Wheeler Ave., Alexandria, VA 22304.

This curriculum framework for K-12 health education includes instructional goals and objectives in ten content areas. Although the section on evaluation is very readable, it is limited to a discussion of the focus and steps in program evaluation. The guide may be used to plan courses of study, explore interrelationships between content areas, and improve total school health program continuity.

Center for Health Promotion and Education. (1984). A compendium of exemplary school health education classroom programs and teaching/learning resources. Atlanta, GA: Centers for Disease Control, Center for Health Promotion and Education. (NTIS # Pb-84218601All). Available from: National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161. Price: $20.50.

This resource document includes a comprehensive section describing exemplary health curriculum projects used in schools across the country. It also provides information on private organization's health education resources and materials, and state agency and federal resources that may be helpful in developing local programs. Included in the latter section is a thorough list of federal clearinghouses and the resource materials they have available. This is a very useful reference for acquiring information on current programs.

Connecticut State Board of Education. (1981). A guide to curriculum development in health and safety. Hartford, CT: Connecticut State Board of Education (ERIC Document No. ED 214 929). Available from: ERIC Document Reproduction Service (EDRS), 3900 Wheeler Ave., Alexandria, VA 22304.

This well designed product describes essential components in health education programs. It also includes current trends and emphases in health education, the philosophy and goals of a health and safety education program as well as steps in the curriculum development process. The content and objectives of a health instruction program are discussed. Sample evaluation checklists for health and safety programs are also included.

Damberg, C.L., & Gilbert, G.G. (1984, May). Common questions and answers regarding school health education: Program development for improvement. Washington, DC: Office of Disease Prevention and Health Promotion. Available from: Information Specialist, National Health Information Clearinghouse, P.O. Box 1133, Washington, DC 20013-1133. No charge.

A brief list of resources available to help design, implement and improve school health education programs is described in this booklet. It also succinctly describes comprehensive school health programs and provides information and addresses to acquire school health curricula and program information.

Manning, D.T. & Ensor, P. (1983, March). Using evaluation techniques to select health education programs. Journal of School Health, 53, 3.

This concise article provides guidelines for choosing an effective program by posing questions that are normally raised at the end of an evaluation. Acquiring answers to questions such as "Do the program objectives match your own purposes?" or "Are your resources adequate to replicate the program?" contributes much toward ensuring that appropriate information is acquired before program selection.

Michigan State Board of Education. (1981). Essential performance objectives for health education. Lansing, MI: Michigan State Board of Education. Available from: School Program Services, Michigan Department of Education, P.O. Box 30008, Lansing, MI 48909. No charge, but supply is limited.

Michigan's health education performance objectives (K-9) for disease prevention, personal health, nutrition, growth and development, family health, mental health, substance abuse, consumer health, safety and first aid and community health

are provided. These objectives provide Michigan educators with a curriculum guide for developing a sequential health program. They will be useful to readers as a planning resource. The objectives also guide the development of a statewide assessment of health in Michigan. Results of this assessment should also be reviewed.

In the area of health services, here are materials which can help you identify strategies for achieving school health goals:

Division of Evaluation, Attendance and Pupil Services. (1984, September). A guide for school health program management. (General Bulletin #26). Downey, CA: Los Angeles County Office of Education. Available from: Division of Evaluation, Attendance and Pupil Services, Los Angeles County Office of Education, 9300 East Imperial Highway, Downey, CA 90242-2890. Price: $2.50.

This guide for school health services includes a rationale, organizational criteria, process criteria and outcome criteria for each service area. Readers will find it useful as a planning resource.

National Association of School Nurses, Inc. (1981). Guidelines for a model school nurse service program. Englewood, CO: National Association of School Nurses, Inc. Available from: National Association of School Nurses, Inc., P.O. Box 1300, Scarborough, ME 04074. Price: $3.00.

Sixteen standards to guide schools in developing and improving health service programs are included in this pamphlet. The guidelines addressed are broad with the intent that school systems develop their own specific health policies. This is a very useful document for planning and evaluation.

Texas Education Agency. (1984, August). School nurse handbook for the school health program. (rev. ed.) Austin, TX: Texas Education Agency. Available from: Publications Distribution Office, Texas Education Agency, 201 East 11th Street, Austin, Texas 78701. Price $4.00.

This handbook is intended to assist administrators and school nurses in planning and implementing school health programs. Information is presented in eight sections, devoted to history of the school health program, administration, framework and guidelines, school nursing services, responsibility of the school nurse, student services, accountability and inservice education. Three additional sections are concerned with resources, legislation and sample forms.

Wold, S.J. (1981). School nursing: A framework for practice. St. Louis, MO: C.V. Mosby Company. Available from: C.V. Mosby Co., 11830 Westline Industrial Dr., St. Louis, MO 63146. Price: $24.95.

This inclusive book of readings presents a comprehensive framework for school nursing practice. It describes in depth the various roles and goals of the nurse as part of the health team. The chapter on expanding the nurse's role provides a very helpful list of common problems in school settings and goals and strategies to overcome these.

Wold, S.J. (1982). Levels of school nursing service: Impact on the scope and quality of the school health program in differentiated levels of student support services and programs. In G. Dean Miller (Ed.) Differentiated levels of student support services and programs: Crisis, remedial and developmental/preventative approaches. St. Paul, MN: Minnesota Department of Education. Available from: Pupil Personnel Services, Minnesota Department of Education, Capitol Square Building, 550 Cedar Street, St. Paul, MN 55101, Attention: Carolyn Robinson. No charge.

This report is an excellent description of the role of health services in school health, including displays of components of school health, roles/goals of school nursing and differentiated levels of school health and nursing.

Resource materials for achieving school health goals in the areas of social and physical environment are listed below:

Centers for Disease Control. (1978, September). Health and safety in the school environment: A manual of recommended practice. (Publication #CDC 78-8368). Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control. Available from: Publications Activities, Center for Environmental Health, Centers for Disease Control, Atlanta, GA 30333. No charge, but supply is limited.

This manual provides a concise review of health related aspects of the school environment. Environmental standards for the school building are described along with suggested additional sources of information. Considerations include the planning of new schools, site selection, water supply, plumbing, sewage disposal, food service, illumination, thermal environment, acoustics, injury control, solid waste management, pest control and maintenance. The manual is quite readable and a valuable resource for planning an evaluation of the school facility.

Health Insurance Association of America/American Council of Life Insurance. (1985). Wellness at the school worksite. Washington, DC: Health Insurance Association of America. Available from: Education Relations and Resources, Health Insurance Association of America/American Council of Life Insurance, 1850 K Street, N.W., Washington, D.C. 20006-2284. Price: $6.00.

This manual is intended to assist educators in setting up and carrying out effective wellness activities for school staff--teachers, administrators and support staff. It has three main objectives: 1) to offer information based on the experience of other employers who have implemented wellness-at-the-worksite programs; 2) to provide practical advice on how to design and implement such programs; and 3) to give specific suggestions on where to go and what to use in developing programs. The manual includes sample instruments, sample program activities, and a listing of relevant resource agencies and materials.

Howard, E.R. (1981). Improving school climate: A total staff development kit. Alexandria, VA: Association for Supervision and Curriculum Development. Available from: Association for Supervision and Curriculum Development, Department 1190, 225 N. Washington St., Alexandria, VA 22314. Price: $95 for ASCD members; $125 for nonmembers.

This kit is designed for educators who want to analyze their school's climate and make an organized effort to improve it. The kit includes three sound filmstrips, two mini-audits, and a leader's guide--all the materials needed for a series of staff meetings and related activities aimed at climate improvement.

A strategy is any concerted set of activities designed to bring about change in people. A strategy can take the form of a policy mandate, formal instruction, informal modeling of behavior, facility modification, or direct intervention. It is not a coincidence that these strategies sound suspiciously similar to the four school resources for achieving health goals. We can have a positive affect upon student's health by:

School health strategies mobilize school resources.

1. Adopting <u>administrative rules</u> that reinforce positive health behaviors, restrict negative health behaviors and require school health efforts to be implemented.

2. Adopting <u>health curriculum</u> that enables students to acquire the desired health knowledge, attitudes and behaviors.

3. <u>Training, organizing and deploying staff</u>, which enables school health goals to be achieved through instruction, services and the modeling of positive health behaviors.

4. <u>Modifying the school facilities</u> in a manner that protects students from harm and promotes a positive social climate.

Generally, one resource strategy is insufficient to foster lasting school improvement. For example, suppose a school wishes to add an objective on consumer health to its instructional program. It would be necessary not only to expand the <u>curriculum</u>, but also to train <u>staff</u>. The key to effective goal accomplishment lies in determining what <u>combination of resources</u> has the best chance of bringing about lasting improvements.

Once the strategies have been identified for achieving each goal, the specific objectives and activities for each strategy can be written. The objective states what measureable outcome (usually in terms of students' knowledge, attitudes, behavior or physical state) is expected as a result of the strategy. Activities specify in detail the tasks, timelines and person(s) responsible for completion of each step.

An example of a goal and its related strategies, objectives and activities is shown on the following page.

GOAL: Provide a school climate which promotes and reinforces positive social relationships among students and staff.

STRATEGIES	OBJECTIVES	ACTIVITIES
Implement a curriculum unit on positive interpersonal skills.	1. Reduce the incidence of physical aggression among students. 2. Promote use of appropriate conflict resolution methods by students.	a. Adopt and disseminate curriculum units on interpersonal relation skills and conflict resolution. b. Train and orient staff in use of curriculum. c. Implement curriculum. d. Sponsor a week of interpersonal awareness activities in the school to model positive social skills.
Implement a staff development program for improving school climate.	1. Increase the perceived levels of trust, respect and communication among students and staff.	a. Hold a staff meeting to brainstorm ways to improve school climate. b. Conduct workshops on establishing levels of trust and mutual respect. c. Conduct workshops on interpersonal communication skills.
Modify the physical environment to promote open communication and a sense of security.	1. Increase the perceived degree of warmth and openness by modifying or enhancing the aesthetics of the halls and classrooms.	a. Repaint halls and classrooms with light colors. b. Increase lighting level in hallways. c. Decorate hallways with students' artwork. d. Establish a center where students and staff can talk together informally.

Three tasks need to be completed in this section:

Task	Person Responsible	Deadline for Completion
a. Review goals and identify strategies.		
b. Develop objectives and activity plans for each strategy.		
c. Review plan for clarity and practicality. Revise as needed.		

B. Does your school health plan match your selected goals?

This step calls for deductive reasoning: Would the collective effects of your planned activities logically result in the achievement of your goals? Answering this question requires an understanding--acquired through experience--of how well things function in an educational setting in general, and in your school in particular. What kind of action is required to bring about each desired result?

"Would...your planned activities... result in the achievement of your goals?"

One practical way to test the congruence between activities and goals is to ask, "If the activities in this plan were completed perfectly, without any problems at all, would it be reasonable to expect that the goal would be achieved? If not, why not?" Remember that, for countless reasons, a plan that looks workable on paper may be hard to achieve in the same form in real life. Suppose, for example, that a goal of our school health plan is to reduce the incidence of drug and alcohol use by students who are experiencing problems with these substances. Suppose, further, that the activities we are considering offering to meet this goal consist mainly of presenting information about the negative effects of substance abuse--disseminating literature, holding discussions, arranging for guest speakers, etc. Assuming that the material offered is accurate, informative and presented precisely as called for in our plan, we can ask ourselves if it is reasonable to expect that the desired change (reduction of drug and alcohol use) will occur among members of

the target group (those experiencing drug and alcohol problems). We can, through this sort of analysis, identify weaknesses in the match between the plan and the goal--in this case, we can ask ourselves if it is realistic to expect that information alone will have much impact with students already experiencing problems. Perhaps we will conclude that presenting information is a suitable approach for activities aimed at <u>preventing</u> problems; but if we also wish to maintain our original goal of <u>intervention</u>, we may well need to provide activities and services which are a better match with that goal--activities which go considerably beyond information sharing.

Completion of this step involves only two tasks:

Task	Person Responsible	Deadline for Completion
a. Review the plan for congruence between goals and activities.		
b. Revise planned activities and strategies as needed.		

C. Is the school health plan organized in a meaningful way?

Are the steps organized in some consistent way? For example, curriculum people talk about scope and sequence. The manner in which curriculum objectives are organized reflects some expectation about the order in which a subject should be taught. Similarly, it's appropriate for us to have expectations about how plans should be organized. Consistency means more than just doing first things first. It also requires recognizing how you get the staff to adopt and implement the school health plan you have developed. In the process of adopting any new practice, an individual goes through several stages: initial awareness, increased interest, understanding, trial use, routine adoption and integration into his/her pattern of doing things. Recognizing this natural progression, you might structure your plan to start with an orientation, followed by training and practice, then follow-up reinforcement.

Planners need to test the organization and consistency of the school health plan.

Following are suggested criteria by which the school health improvement team can evaluate your plan's internal consistency:

1. What would happen if you changed the <u>order</u> of the activities in the plan? Would things work better or worse?

2. Is the plan organized around some accepted framework? If not, why? If so, are there pieces missing?

3. If you started with the last activity and worked backwards, would there still be a logical link between the steps?

4. Does the plan include multiple strategies for changing and reinforcing health knowledge, attitudes and/or behavior?

Completion of this step also involves only two tasks:

Task	Person Responsible	Deadline for Completion
a. Review plan for internal consistency.		
b. Revise planned activities and strategies as needed.		

D. Have you identified resources to accomplish the plan?

In Chapter I we discussed the resources available for implementing school health--policy, curriculum, staff and facilities. But to use these school resources to implement the school health plan may require the expenditure of financial resources. Have you considered all the cost ramifications of the activities? Release time for staff inservice? Facility costs? Materials and equipment? What about ongoing costs for maintaining the activities?

Figuring costs calls for careful review of planned activities.

In order to determine the financial resources needed to implement the plan, you must develop a budget. Review each activity in the plan. How much additional time will be required for staff to accomplish the activity? What additional equipment, supplies or materials will be needed? Will you need consultants or trainers? How will these costs vary from year to year?

Develop a budget that details startup and operating costs. Startup costs are those one-time costs required to develop and implement an activity, such as the purchase of curriculum materials, facility modifications, and equipment purchases. Operating costs are day-to-day costs associated with the ongoing operation of a program, including orientation and training, replacement of consumable materials and repair of equipment.

Once a budget has been developed, administrative decisions can be made concerning the adequacy of school funds and the

appropriateness of the budget for achieving school health goals.

Assign responsibility for the development of a budget for the school health plan:

Task	Person Responsible	Deadline for Completion
a. Conduct task analysis of each activity to determine what additional costs will be required for implementation (startup).		
b. Project ongoing operating costs of the activity.		
c. Submit budget for administrative review and consideration.		

E. Is there sufficient staff commitment to accomplish the plan?

The development of new goals and plans for school health has direct implications for the staff, both personally and professionally (Hall, 1976). The activities may call for changes in each individual's health behavior and role in the school. Initial concerns about change are personal: How will the plan affect me? What will I be doing differently? Staff understanding, acceptance and commitment is necessary to move through this crucial period of uncertainty.

Communication and training enhance staff commitment and enthusiasm.

While staff commitment is necessary to any plan's success, the lack of commitment does not justify abandoning a plan. If the plan itself is a good one, find ways to increase staff commitment by increasing their involvement. Do they understand what needs to be done and why? Have they had an opportunity to "buy in" to the goals of the plan? Have provisions been made for periodic progress reports to reinforce the plan's long-term effects? A series of staff meetings to acquaint staff members with the purposes of proposed activities, explain how they'll be affected, outline any proposals for staff development, and invite comments and suggestions can do much to generate enthusiasm.

Administrative commitment is even more important. It takes more than financial resources to achieve school health goals. Administrative support can substantially increase the odds that a school health plan will be feasibly implemented.

> The principal is expected to be responsible for the organization and administration of the total school health program. These responsibilities include implementing state, local and national health policies, budgeting, selecting and supervising teaching staff,

scheduling class time, planning and implementing inservice programs on health education for staff and evaluating the total school health program within a leadership role (Davis, 1983).[4]

By participating in planning and training for school health, the administrator demonstrates to staff that school health is important. An enthusiastic administrator can do much to reinforce the interests and commitment of staff.

Stevens (1984) found that school districts which exemplified school health promotion reflected a shared interest and excitement among administrators, staff, students and the community concerning school health. Since this enthusiasm is contagious, the team may want to build into the plan some initial activities to spark school and community interest. If you have not ordered the marketing kit from ASHA, do so now:

American School Health Association. (1983). School health, a healthy child: The key to the basics. Kent, OH: American School Health Assocation. Available from: American School Health Association, P.O. Box 708, Kent, Ohio 44240. Price: $5.00.

This school health marketing program includes a series of modules for local program development. The kit includes program planning guidelines and evaluation materials, as well as a simple guide for rating school health programs. This kit is useful for devising a marketing plan for school health promotion.

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Here are the tasks which need to be accomplished in this step:

Task	Person Responsible	Deadline for Completion
a. Integrate commitment-building activities into the plan.		
b. Assess degree of staff commitment and administrative support through discussions at staff meetings.		
c. Sponsor activities to generate community support for the plan.		

Now you have a plan for promoting school health. The plan is based on desirable goals and a feasible set of activities. To determine whether the plan really was implemented as intended, we need to move on to the next chapter.

CHAPTER IV

How to Assess the Implementation of School Health Activities

In Chapter III we discussed the critical steps involved in planning school health activities. These activities are then implemented in the school. In this chapter, we address the assessment of actual implementation of the plans. That is, we need to be assured that each activity really took place as intended. Or to put it another way, we need to be certain that we have correctly implemented causes before we go on to trace their effects. This assessment takes place concurrent with implementation.

In evaluating implementation of a plan, we focus on fidelity. Fidelity means the degree to which a plan is carried out as intended. The question to ask here is, "Were the activities described in the plan authentically reproduced in the school?"

Fidelity: Was the school health plan carried out as intended?

Assessing fidelity is a diagnostic process. First, we determine whether the plan was carried out as intended and, if not, we then diagnose why the plan did not work and how it can be improved. This requires some detective work. Did the staff have the opportunity, motivation and resources to implement the plan? Were there flaws inherent in the plan which resulted in its failure, such as missing steps or unrealistic schedules?

Hall and Loucks (1977) have introduced the concept of levels of use. They refer to a continuum of implementation: On one end of the continuum is nonuse, in which the staff member has little or no knowledge of or involvement in the activity and has no

motivation to become involved. On the other extreme is renewal, where the staff member is fully using, evaluating and refining the activity to improve its long-term effectiveness. In between these points, we have (a) an orientation stage, where the staff member is becoming interested; (b) a preparation stage, where plans are being made to do the activity; (c) the mechanical implementation of the activity; (d) the routine use of the activity; (e) the refinement of the activity to better meet the needs of students; and (f) the integration of the activity into the collective efforts of the school staff as a whole.

We want to see the long-term goals for school health become an integrated part of the school's operation, where activities are routinely evaluated and refined as a process of renewal. This will not happen overnight, nor will it happen by chance. The school must draw upon each of its four resources--policy, curriculum, staff and facilities—to ensure that the school health plan is implemented as intended.

In the next six sections specific methods will be discussed for

a. Monitoring the implementation of the health plan.

b. Monitoring school health policy.

c. Monitoring school health curriculum.

d. Monitoring school health staff.

e. Monitoring the school facilities.

f. Drawing conclusions from the monitoring results.

A. Are you monitoring the implementation of the school health plan?

Monitoring an activity plan is rarely as difficult or tedious as it sounds. Most activities result in some documentation that can be used as "evidence" that the activity really took place. This means you shouldn't have to create a great deal of additional paperwork. But you will need to pay close attention to the clues that tell you how an activity was handled. What can you observe or read or hear that will tell you the plan is being implemented?

Look at the steps in your school health plan. How can you tell when each activity is done? Workshops have outlines, meetings have agendas, materials have requisitions, instructional activities have lesson plans, health services produce student records, and so forth. However, not all information in the school's existing recordkeeping system will be relevant or useful. Only records that are appropriate, complete and accurate will be useful in documenting your school's planned health activities.

The process of monitoring attempts to answer three questions:

1. Was the plan implemented as intended?
2. If not, why wasn't it implemented as planned?
3. How could the plan be improved?

Answers to these questions are gathered through observations, interviews, surveys and records reviews. Usually, some combination of these methods is used. The team must design a monitoring procedure to guide the process. The monitoring procedure defines what to monitor, the standard for evaluation, and the method for collecting the information.

First, what do you monitor? School health plans are intended to achieve long-term goals. This suggests that each activity shouldn't have to be monitored over and over again throughout the years. The key features of a plan should be monitored. These are the events or operating characteristics crucial to the plan's success. What actions will tell you the plan is going OK?

Monitoring focuses on elements which are crucial to the plan's success.

Here are some key characteristics of teachers implementing a health education curriculum:

Classroom Teachers

a. Demonstrate an awareness, understanding and commitment to the program.

b. Participate in the inservice training for the program.

c. Use the lesson plans as prescribed and in the appropriate sequence.

d. Collect and record student performance information using the forms and procedures of the program.

e. Devote sufficient class time to the lessons.

f. Use resource materials as part of the lessons.

The second step is to determine the standard for evaluation. What is acceptable and not acceptable performance? If these standards are not specified in the school health plan, they can

be adopted from state or professional standards or developed locally by the team. Using a health education curriculum example, here are the identified standards.

Key Features	Acceptable Standard
Classroom Teachers	
a. Demonstrate an awareness, understanding and commitment to the program.	At least 80 percent of the teachers will be able to list the ten units in the curriculum and describe them in a favorable manner.
b. Participate in the inservice training for the program.	At least 90 percent of the teachers will attend the inservice.
c. Use the lesson plans as prescribed and in the appropriate sequence.	At least 80 percent of the teachers will cover at least nine of the units during the year in the correct sequence.
d. Collect and record student performance using the forms and procedures of the program.	At least 70 percent of the teachers will use the tests provided for the units taught.
e. Devote sufficient class time to the lessons.	At least 70 percent of the teachers will devote at least 30 minutes per week to the lessons.
f. Use resource materials as part of the lessons.	At least 70 percent of the teachers will have ordered materials for at least five of the units.

The third step in developing a monitoring process is to identify the method for gathering information. Would it be most efficient to observe, interview, survey or review records to find out whether the key feature exists? In each method, information is collected by using a structured procedure. Observation involves systematically viewing classrooms or activities to record the incidence of transactions, events or things.

Interviewing involves systematically asking an individual a series of questions and recording their responses. Surveying involves the systematic distribution of written questions which the respondents complete and return in writing. Records review involves the systematic collection and organization of information gathered from written documents. If the activity would routinely result in written information, then a records review would be the appropriate method. If the activity would routinely and predictably result in observable behavior, then observation methods would be appropriate. If the activity were to occur on an incidental basis, then interviewing could be used; if it were primarily a matter of attitude, then surveying would work.

Interviewing staff as a part of the monitoring process is very common because it enables the monitor to gain additional insight regarding why an activity wasn't implemented as planned and how it could be improved.

Table 7 summarizes the monitoring methods we identified for our health education program.

Table 7

Monitoring the Health Education Program

Key Features	Acceptable Standards	Monitoring Method
Classroom Teachers		
Demonstrate an awareness, understanding and commitment to the program.	At least 80 percent of the teachers will be able to list the ten units in the curriculum and describe them in a favorable manner.	Survey teachers.
Participate in the inservice training for the program.	At least 90 percent of the teachers will attend the inservice.	Review inservice attendance roster.
Use the lesson plans as prescribed and in the appropriate sequence.	At least 80 percent of the teachers will cover at least nine of the units during the year in the correct sequence.	Observe teachers and review lesson plans.
Collect and record student performance using the forms and procedures of the program.	At least 70 percent of the teachers will use the tests provided for the units taught.	Interview teachers and review grade book.
Devote sufficient class time to the lessons.	At least 70 percent of the teachers will devote at least 30 minutes per week to the lessons.	Interview teachers.
Use resource materials as part of the lessons.	At least 70 percent of the teachers will have ordered materials for at least five of the units.	Interview teachers.

Who does the monitoring? For purposes of evaluating implementation of the school health plan, the team or an outside group of professionals could conduct the review. The peer review process is, in fact, the most commonly used method of evaluation in schools, involving the completion of a standardized checklist which identifies the desirable qualities of a school. This is a useful process for determining the fidelity of school health activities only if the standards described in the checklist are considered desirable and feasible by the school. Green and Bertram-Brooks (1978) note that a peer review process, such as the monitoring procedures described here, should be based upon quality assurance standards which are (1) uniformly accepted and applied among schools, (2) understandable and based on the consensus of school health professionals, and (3) current, allowing for new ideas and innovations.

Peer review can be used to evaluate the implementation of the plan.

If a team is used to monitor implementation, it must be made very clear to both the school staff and the monitors that the purpose of the review is not to evaluate the adequacy or competence of staff performance. That function is the responsibility of the administrator.

One resource which we have found particularly useful is How to measure program implementation by L. Morris and C. Fitz-Gibbon (1978). This is available from Sage Publications, Inc., 275 Beverly Drive, Beverly Hills, CA 90212. The book is part of the Program Evaluation Kit. Price: $7.95-guide; $59.95-kit.

Here are the tasks the team needs to accomplish to develop a monitoring plan:

Task	Person Responsible	Deadline for Completion
a. Review school health plan to identify key features.		
b. Establish standards for judging compliance to the key features.		
c. Establish method of collecting monitoring information.		
d. Schedule and assign monitoring tasks.		
e. Revise school health plan based on monitoring findings.		

B. Are you monitoring the use of school health policy?

Monitoring policy development is a relatively straightforward task since it is a "paper process." Essentially, you need to determine whether the development and implementation of a new policy followed the accepted procedures for its preparation, approval and dissemination. Next, you need to see if school staff are aware of the new policy. Then, determine whether the policy is being properly used. And finally, identify any exceptions in application of the policy, and determine the nature of the consequences. If there are many exceptions, the policy is probably too vague or confusing. If it is not being used even when the appropriate opportunity exists, then its purpose needs to be more directly communicated to staff members.

Policy-based monitoring is a relatively common method for assessing the implementation of a school health plan. If your school health plan uses policy as a basis for improving school health, then this approach is highly recommended. The Texas Education Agency has developed an excellent example of this method, which is provided, in part, on page 108.

To monitor policy, the team will need to accomplish the following tasks:

Task	Person Responsible	Deadline for Completion
a. Review school health plan to identify policy strategies.		
b. Select key features from the policy related sections of the plan.		

Task	Person Responsible	Deadline for Completion
c. Develop standards and methods for monitoring.		
d. Schedule and assign monitoring tasks.		
e. Revise school health plan based on monitoring findings.		

Healthy Independent School District

Healthy, Texas

- HEALTH SERVICE
- HEALTH EDUCATION
- HEALTH ENVIRONMENT

ASSESSMENT OF THE SCHOOL HEALTH PROGRAM

ADMINISTRATION

Part 1

The success of a school health program depends on understanding and leadership of administrators and school boards. Administrators recognize that experiences provided to students through the health program provide a foundation for establishing positive attitudes in later life. They are responsible for planning, implementing, and evaluating the health program. The school health program should be coordinated with other school activities and community groups. School boards are responsible for providing the districts with policies which support the school health program.

COMPLIANCE SCALE: (4) Policy is being implemented (3) Policy has been developed (but not yet implemented) (2) Policy is being considered (1) Activities are being conducted, but there is no written policy (0) No written policies or activities in place

Criteria	Compliance 4	3	2	1	0	Recommended Steps to be Taken for Improvement
I. Administration A. The policies of the local school district provide a school health program designed to help all students achieve the highest degree of health possible. (19 TAC 85.41)						
1. The policies provide for a comprehensive and well planned school health program that reflects current legal requirements. Policies include: • Planning, development, and evaluation						
• Health counseling						
• Screening • Vision						
• Hearing						
• Other						
• Prevention and control of communicable diseases						
• Immunization						
• Exclusion and reporting of students or employees who have communicable diseases						
• Provision for emergency cases						
• Consultation and coordination with other student services						

ASSESSMENT OF THE SCHOOL HEALTH PROGRAM

COMPLIANCE SCALE: (4) Policy is being implemented (3) Policy has been developed (but not yet implemented) (2) Policy is being considered (1) Activities are being conducted, but there is no written policy (0) No written policies or activities in place

Criteria	Compliance 4	3	2	1	0	Recommended Steps to be Taken for Improvement
• Liaison with community health resources						
• Referral and follow-up of students health problems, including referral to appropriate community resources.						
• Student health appraisal						
• Maintenance of pupil health records						
• Reporting of child abuse						
• Administration of medication by school personnel						
• Eye injury reporting and eye protective devices for specific laboratory situations						
2. The policies provide for coordination of health services by the schools; health departments; educational, professional, and parent organizations; and other responsible community groups.						
B. The school health program's written purpose, goals, objectives, and degree of implementation are reviewed annually by school administrators and health services personnel to assure the program's validity and effectiveness.						
These are designed to: 1. Determine the direction of the school health program						
2. Facilitate the promotion of student, staff, and community health						
3. Facilitate effective cooperation of administrators, health service personnel, teachers, and nonteaching staff						
4. Provide for health service personnel inservice education						

ASSESSMENT OF THE SCHOOL HEALTH PROGRAM

COMPLIANCE SCALE: (4) Policy is being implemented (3) Policy has been developed (but not yet implemented) (2) Policy is being considered (1) Activities are being conducted, but there is no written policy (0) No written policies or activities in place

Criteria	Compliance 4	3	2	1	0	Recommended Steps to be Taken for Improvement
5. Establish procedure for compiling and analyzing health services data						
6. Evaluate: • Compliance with legal requirements						
• Program effectiveness						
• Program needs						
• Staffing patterns						
7. Provide an annual report to be submitted to the appropriate school administrators and the local school board.						
C. The district has provided necessary resources and assigned well qualified personnel to provide leadership for implementing and maintaining a comprehensive school health program.						
1. A qualified person with professional preparation in health services and administration has been delegated responsibility at the district level for providing leadership to the school health program.						
2. Written job descriptions define the duties of each person who has responsibility in the school health program.						
3. All personnel responsible for providing direct health services receive a formal evaluation according to district policy.						
4. The district provides staff development for health service personnel on health issues, practices, and methods.						

ASSESSMENT OF THE SCHOOL HEALTH PROGRAM

COMPLIANCE SCALE: (4) Policy is being implemented (3) Policy has been developed (but not yet implemented) (2) Policy is being considered (1) Activities are being conducted, but there is no written policy (0) No written policies or activities in place

Criteria	Compliance 4	3	2	1	0	Recommended Steps to be Taken for Improvement
5. The student/school nurse ratio is determined by student health needs, legal requirements, number of individuals with special health care needs, availability of clerical assistance, mobility of population, and geographic area.						
6. Physicians, dentists, and other medical specialists are available for consultation.						
D. The district provides adequate facilities, equipment, and supplies to operate the school health program.						
1. Appropriate health office (clinic) facilities allow for implementation of the school health program. At each campus:						
• Work space is adequate						
• Desk, file cabinets, supplies, and chairs are provided						
• Telephone is available for confidential conversations regarding school health program						
• First aid supplies are available and adequate throughout the year						
• Privacy is provided for health counseling, health assessments, and conferences						
• Isolation area is available for communicable diseases						
• Cot is available for every 400 students						
• Cots are washable or provided with disposable sheets and pillow cases						

ASSESSMENT OF THE SCHOOL HEALTH PROGRAM

COMPLIANCE SCALE: (4) Policy is being implemented (3) Policy has been developed (but not yet implemented) (2) Policy is being considered (1) Activities are being conducted, but there is no written policy (0) No written policies or activities in place

Criteria	Compliance 4	3	2	1	0	Recommended Steps to be Taken for Improvement
• Locked cabinet or drawer is provided for medication storage						
• Hot and cold water and ice are easily accessible to the clinic area						
• Private and asceptic area is provided for administering special procedures for handicapped students						
E. The district promotes integration of health and safety in all curriculum and extracurricular activities.						
1. The health services coordinator is a resource person in the selection of health-related curriculum.						
2. The health services coordinator acts as a resource person for building and ground safety management.						
F. The district administrators define and develop effective working relationships among agencies, professionals, and community groups to communicate health concerns to the community.						
1. Guidelines for advisory committees or community liaison committees, and health service personnel are established by the district.						
2. A current list of community health resources is maintained and effort is made to increase resources for the benefit of district access for student referral.						

From: Texas Education Agency. (1984, August). School nurse handbook for the school health program. (rev. ed.) Austin, TX: Texas Agency. Available from: Publications Distribution Office, Texas Education Agency, 201 East 11th Street, Austin, Texas 78701. Price: $4.00

C. Are you monitoring the use of school health curriculum?

Curriculum development and implementation are also relatively easy to monitor because of the "paper trail." Again, you need to determine whether the curriculum adoption, development or revision processes adhered to the school health plan. Then, ascertain the extent to which instructional staff are aware of the curriculum. Finally, see whether the curriculum is being used appropriately, if at all.

Both the curriculum development process and the curriculum implementation process can be monitored. The curriculum development or selection process entails establishing standards for the curriculum materials themselves. Then, usually through a team approach, materials are reviewed, rated and the preferred material selected for adoption.

Scheer and Williams (1977) provide an example of an evaluation form for the selection of health curriculum materials.

Criteria for Rating Health Texts	Book has special strengths/values here	Ok	Not Applicable/unknown	Not Ok	Serious weakness/ problem here
A. Authors/Consultants/Publishers					
1. Recognized experts in the field of health education? (You might check Who's Who or look for a personal note on authors near title page.)		A	B	C	D E
2. Former and current involvement in teaching health or contribution to health sciences through research or curriculum development.		A	B	C	D E
3. Previous experience in writing textbooks.		A	B	C	D E
4. Writing ability. Note sentence structure, choice and use of colorful words and objectionable slang.		A	B	C	D E
5. Publisher's reputation in publishing educational materials.		A	B	C	D E
6. Copyright data--completeness of revisions? Current information?		A	B	C	D E
7. Learner verified?		A	B	C	D E
B. Scope of the Program					
1. Check how well the text attends to the following areas:					
a. Emotional (mental health)--learning to use instinctive drives for expressing oneself constructively and establishing healthful behavior patterns.		A	B	C	D E

Adapted from: Scheer, J. & Williams, I. (1977, Nov.-Dec.) Shopping for the best text. Health Education, 8 (6), 26-27. Reprinted by permission of the American Alliance for Health, Physical Education, Recreation and Dance, 1900 Association Drive, Reston, Virginia 22091.

Criteria for Rating Health Texts	Book has special strengths/values here	OK	Not Applicable/Unknown	Not OK	Serious weakness/ Problem here
b. Social health--an understanding of social relationships and their relation to health behavior.		A	B	C	D E
c. Physical health--the physical aspects of health presented to show the interdependence of the various systems and its relation to total health.		A	B	C	D E
2. How well does the text avoid overemphasizing any one phase of health (e.g., too much physical health)?		A	B	C	D E
3. Does the text avoid needless repetition?		A	B	C	D E
4. Can learning activities be carried over to promote good health habits in adult life?		A	B	C	D E
5. Does the text teach health as opposed to a technical medical approach?		A	B	C	D E
C. Approach					
1. Does the text take a positive approach to health?		A	B	C	D E
2. Does the text avoid all-inclusive statements (e.g., "We are always good sports")?		A	B	C	D E
3. Does the text take samples from all walks of life rather than just the ideal situation? Does it develop tolerance for unfamiliar customs and actions?		A	B	C	D E

Criteria for Rating Health Texts	Book has special strengths/values here	Ok	Not Applicable/unknown	Not Ok	Serious weakness/ problem here
4. Are questions and situations, as well as experiments, provided at frequent intervals throughout each chapter to motivate class discussion and help pupils relate what they know to what they have just read?	A	B	C	D	E
5. Do useful activities appear at the end of each chapter?	A	B	C	D	E
6. Does the text take an approach which has social studies overtones as opposed to the science-oriented approach?	A	B	C	D	E
7. Does the text correlate health topics with other curricular concerns?	A	B	C	D	E
8. Are there numerous subheadings to help the pupil understand what he is reading?	A	B	C	D	E
9. Are the health topics related to personal, family, and community living?	A	B	C	D	E
10. Does the text address factors known to be determinants of health behavior?	A	B	C	D	E
11. Does the text deal with preventive health as well as ill health?	A	B	C	D	E
D. Content Criteria					
1. Sequence of presentation of material.	A	B	C	D	E
2. Appropriateness of the objectives of the course: Is the content appropriate for developing skills, understanding, and attitudes? Select a subject area in the text and compare information given there with objectives set up in a course of study for a similar subject.					

Criteria for Rating Health Texts	Book has special strengths/values here	OK	Not Applicable/Unknown	Not OK	Serious weakness/ Problem here
a. Does the text contain biased views on controversial subjects?	A	B	C	D	E
b. Does subject matter develop sound moral values?	A	B	C	D	E
3. Suitability to grade level: Are all appropriate topics included? Logical, suitable comparisons?	A	B	C	D	E
4. Terminology: Is it current? Adequate?	A	B	C	D	E
5. Concept formation: Does material adapt itself to individual differences? Appeal to both sexes? Provide help for slow readers? Have extra challenges for superior students?	A	B	C	D	E
6. Does the content help students recognize the differences among facts, opinions, and propaganda?	A	B	C	D	E
7. Does content build from simple to complex in a manner that increases students' comprehension?	A	B	C	D	E
E. Physical or Mechanical Criteria					
1. Durability.					
a. Cover appeal: Attractive design?	A	B	C	D	E
b. Binding: Paper or cloth cover? Sewn, glued, or stapled? Does it open flat? Reinforced binding?	A	B	C	D	E
c. Paper: Check weight, opacity, finish, durability, and general quality of paper.	A	B	C	D	E

Criteria for Rating Health Texts	Book has special strengths/values here	OK	Not Applicable/unknown	Not OK	Serious weakness/ Problem here
2. Book size.					
a. Reasonable number of pages.	A	B	C	D	E
b. Ease of handling: Is the book a convenient size? Easy to hold? Easy to handle, turn pages?	A	B	C	D	E
c. Print: Is it appropriate for this grade level? Enough spacing between lines to make the text easy to read? As a guide, 4 inches of type on a page should have no more lines than: 10 for children under 7 years; 20 for children from 7-9; 22 for children from 9-12; 24 for children above 12 years of age. Is print clear, plain, sufficiently large? Are the lines proper length for easy reading (not more than 4 inches or less than 3 inches long)?	A	B	C	D	E
3. Eye appeal.					
a. Does the color contribute to content presentation? Is it functional and in good taste or merely decorative? Can the extra cost be justified?	A	B	C	D	E
b. Do headings stand out? Is size and arrangement economical of space? Check columns, margins, line length. Is text arrangement attractive and easy to read?	A	B	C	D	E
4. Readability.					
a. Length of sentences.	A	B	C	D	E
b. Length of paragraphs.	A	B	C	D	E
c. Is the language easily understood?	A	B	C	D	E

Criteria for Rating Health Texts	Book has special strengths/values here	Ok	Not Applicable/unknown	Not Ok	Serious weakness/ problem here
F. Teachability					
1. Teaching aids: Are illustrations, sketches, tables, and graphs used to supplement printed matter? How many appear in any ten pages chosen at random? Is the text teachable?	A	B	C	D	E
a. Readily available from the publisher?	A	B	C	D	E
b. Quality/appropriateness of visuals: How satisfactory are such items as pictures, graphs, maps, word lists, questions for study, references, projects, manuals, problems, annotated film lists? Do the visuals add interest to textual material? (Check for such factors as reality in color, artistic page arrangement, size ample for good perception, minimum of irrelevant details.)	A	B	C	D	E
c. Do materials, suggestions, and teaching aids contribute to attainment of your educational goals?	A	B	C	D	E
2. Workbook: Check quality of the material, coverage of how-to units. Skills and process operation.					
a. Format.	A	B	C	D	E
3. Adaptability.					
a. Chapter format, coverage and related units, well organized with necessary information? Does chapter have proper length? Introductory section? Summaries? Review sections? Exercises?	A	B	C	D	E

Criteria for Rating Health Texts	Book has special strengths/values here	Ok	Not Applicable/unknown	Not Ok	Serious weakness/ problem here
b. Chapter review problems: Relevant? Do they add information not given in the text? Are they practical? Analyze the activities to determine the amount of time, special facilities, out of school resources, etc., needed to carry out the activity. Level of difficulty? Adequate number of problems?	A	B	C	D	E
c. Questions: Meaningful; significant; adequate in number?	A	B	C	D	E
4. Illustrations.					
a. Coordinated with the text on the same page?	A	B	C	D	E
b. Clear, well chosen, good size?	A	B	C	D	E
c. Within range of student's interest?	A	B	C	D	E
d. Within range of student's understanding?	A	B	C	D	E
5. Study helps.					
a. Italics for emphasis?	A	B	C	D	E
b. New words defined, listed and pronounced?	A	B	C	D	E
c. Include up-to-date materials, both printed and audiovisual?	A	B	C	D	E
d. Bibliography.	A	B	C	D	E
6. Reference materials?					
a. Index, tables, appendix complete and easy to read?	A	B	C	D	E
b. Glossary--relevant to subject?	A	B	C	D	E
c. Prefaces.	A	B	C	D	E
d. Are teacher's helps and manuals available?	A	B	C	D	E

Criteria for Rating Health Texts	Book has special strengths/values here	OK	Not Applicable/unknown	Not OK	Serious weakness/ problem here
7. Pupil activities--originality?	A	B	C	D	E
8. Is there a teacher manual?					
a. Is there a manual for each textbook?	A	B	C	D	E
b. Does this manual provide assistance to the teacher in suggesting additional learning experiences for students and sources from which free and inexpensive material can be secured?	A	B	C	D	E
c. Does the manual give adequate aid in using the textbook satisfactorily?	A	B	C	D	E
d. Is a scope and sequence chart available for each grade level?	A	B	C	D	E

Once curriculum materials have been adopted, then their implementation in the classroom can be monitored to determine whether they are actually being put to use. Here are criteria developed by the California Department of Education (1977) for evaluating the implementation of health education curriculum:

Review of Health Curriculum

Criteria	Completely	To some degree Percent 75	50	25	Not at all	Changes needed
A. The educational experience of each student in the elementary school and in the secondary school includes identifiable health instruction.	Steps to be taken to implement needed changes:					
1. The philosophy, goals, and concepts of health instruction are consistent with those included in the current state health instruction framework.						
2. Objectives in terms of student knowledge, attitudes, and behavior related to health have been established at each grade level.						
3. Specific time is provided for health instruction when needed to achieve stated objectives.						
4. Health instruction is integrated with other subjects when such practice will achieve stated health education objectives.						
5. Credit equal to that given for instruction in other subjects is given for health instruction.						
6. At the elementary level, the health instruction program is coordinated with the ongoing instructional program and particularly with early childhood education programs, where the latter exist.						

Adapted in part from: Ryan, R., & Hill, P. (1977). Criteria for evaluating the school health education program. Sacramento, CA: California Department of Education. (ED 152 709). Available from: ERIC Document Reproduction Service, 3900 Wheeler Ave., Alexandria, VA 22304.

Criteria	Completely	To some degree (Percent) 75	50	25	Not at all	Changes needed
7. All students at the junior high school level (except students excused*) receive health instruction for at least one semester or the equivalent. (Instruction is provided in separate courses, minicourses, or coordinated blocks of time in other subjects or through other special scheduling.)						
8. All students at the senior high school level (except students excused*) receive health instruction for at least one semester or the equivalent. (Instruction is provided in separate courses, minicourses, or coordinated blocks of time in other subjects or through other special scheduling.)						
B. Health education focuses upon affective as well as cognitive approaches.	Steps to be taken to implement needed changes:					
1. A balance exists between affective and cognitive approaches to health education in the classroom.						
2. Instructional activities are planned and developed in such a way as to enable students to:						
a. Grow in self-awareness; i.e., develop a positive sense of identity and self-esteem.						
b. Develop skills for effective decision making.						
c. Increase coping skills; i.e., apply learning in daily living.						
3. The students and the health education teacher interact positively.						

*Excuses from health instruction are provided on the basis of religious or personal beliefs.

Criteria	Completely	To some degree Percent 75	50	25	Not at all	Changes needed
4. The following methods are used separately or in combination when appropriate:						
a. Problem solving						
b. Demonstration						
c. Laboratory experimentation						
d. Lecture-discussion						
e. Reading						
f. Discussion						
g. Student projects						
h. Research						
C. The content of health education is designed to serve current and future student health needs.	Steps to be taken to implement needed changes:					
1. Content centers on promotion and maintenance of wellness rather than illness and disease.						
2. The content includes the following, and the degree of emphasis on each area is based on assessed needs of students:						
a. Personal health (wellness, physical fitness, rest and sleep, posture, oral health, vision, hearing)						
b. Family health						
c. Nutrition						
d. Mental-emotional health						

Criteria	Completely	To some degree Percent 75	50	25	Not at all	Changes needed
e. Use and misuse of substances						
f. Diseases and disorders						
g. Consumer health						
h. Accident prevention and emergency health services						
i. Community health						
j. Environmental health						
D. Materials used in health education are current and accurate.	Steps to be taken to implement needed changes:					
1. Materials are up to date.						
2. Materials are scientifically accurate.						
3. Materials are selected for their contribution in meeting objectives of the health education program.						
4. Instruction is enriched by the use of current materials available from official and voluntary health agencies and professional associations.						
5. Instruction is enriched by the use of current audiovisual materials, such as films, filmstrips, models, charts, radio and television programs, and tape recordings.						
E. A plan exists for evaluating the health education program.	Steps to be taken to implement needed changes:					

Criteria	Completely	To some degree Percent 75	50	25	Not at all	Changes needed
1. A planned program of evaluation will appraise the effectiveness of health education in terms of student growth in:						
a. Knowledge related to health						
b. Attitudes toward health and health practices						
c. Health behavior						
2. The results of evaluations are used to improve the health education programs.						

How do you know that a curriculum is in use? Here are some important indicators:

1. Lesson plans are based upon the curriculum objectives or topics.
2. Teachers use the "language" of the materials in their discussions.
3. Material and supply requisitions reflect the curriculum (e.g., requests for specific films).
4. Teacher can be observed using material in the classroom.
5. Students' assignments relate to curriculum topics, and grades are based--in part--on the attainment of objectives.
6. Curriculum materials are not stacked neatly on shelves with the plastic wrap still intact; they show signs of use.

Monitors check signs of curriculum use (or nonuse).

In addition, look for these signs that the curriculum is not being used:

1. Ignorance: Teachers indicate that they were not aware of the curriculum and its planned use.

2. Resistance: Passive resistance or "foot dragging" in the use of the curriculum: "I don't have time" or "I haven't gotten that far yet."

3. Misuse: Radical adaptation of the new curriculum material in ways that are not consistent with the curriculum plan: "I thought it would work a lot better if we skip units 5-9 and teach the rest as part of U.S. History."

4. Disuse: Preliminary use of the material followed by abandonment and criticism of the curriculum: "Sure I tried it, but it doesn't work."

The specific criteria and procedures which the team will use for monitoring the school health plan will again depend upon the specific content of the curriculum strategies described in the plan. The team may be able to adapt an existing monitoring form, or may need to develop a new version.

Task	Person Responsible	Deadline for Completion
a. Review school health plan to identify curriculum strategies.		
b. Select key features from the curriculum related section of the plan.		
c. Develop standards and methods for monitoring.		
d. Schedule and assign monitoring tasks.		
e. Revise school health plan based on monitoring findings.		

D. Are you monitoring the school health staff?

The school staff are key to the implementation of all phases of the school health plan. Monitoring staff includes not only assessing what they do, but also determining how well they were prepared.

Therefore, you need provisions for monitoring formal preparation (Are staff certified to do what they do?), inservice training (Are staff specifically oriented to the school health plan?), and delivery of services (Are staff performing the instructional and other duties in the prescribed manner?).

Monitoring staff preparation and performance helps assure proper implementation of health plan.

The Georgia Department of Human Resources and Georgia Department of Education (1982) developed a self-appraisal checklist for monitoring school health. A portion of this checklist focuses on monitoring staff preparation. See the example on the following page.

Standards and recommended practices	What we are doing	How well do we score 1-Good 2-Fair 3-Poor	How can we improve
Well-prepared personnel, in all phases of school health program, are essential for effective and successful implementation.	Qualifications of school health personnel School health coordinator _____ Managerial experience in school health or related area _____ Recent courses or workshops related to school health _____ Certificated _____ Other (list)	_____	
	School nurses _____ Registered Nurse with baccalaureate degree _____ Registered Nurse with diploma or A.D. _____ Licensed Practical Nurse _____ Certificated _____ Courses in school health (number of years)	_____	
	Health Educator _____ Certificated _____ Experience as health educator _____ Recent courses or workshops related to health education _____ Other (list)	_____	
	Nutrition director _____ Registered Dietitian with baccalaureate degree _____ Certificated _____ Other (list)	_____	
	Secondary teachers assigned to teach health _____ Certificated in health education	_____	

Adapted from: Georgia Department of Human Resources and Georgia Department of Education (1982). Check your school health program. Atlanta, GA: Georgia Department of Human Resources; Georgia Department of Education. Available from: Georgia Department of Human Resources, Central Supply, 1050 Murphy Ave., Atlanta, GA 30334. No charge, but supply is limited.

Assessing staff inservice requires answering two questions: First, was inservice training provided as planned? Second, how well did the inservice prepare the staff to implement school health? The Georgia materials address inservice training:

Standards and recommended practices	What we are doing	How well do we score 1-Good 2-Fair 3-Poor	How can we improve
• To provide for special in-service education programs to be conducted for personnel directly involved in the health program. Health education staff are resource people and should closely relate to in-service training programs.	Special in-service education programs provided for: Teachers _____ Yes _____ No _____ One-half day or less _____ One day or more _____ College credit	_____	
	Nurses _____ Yes _____ No _____ One-half day or less _____ One day or more _____ College credit	_____	
	Administrative personnel (guidance counselors, social workers, nutrition personnel, etc.) _____ Yes _____ No _____ One-half day or less _____ One day or more _____ College credit	_____	
	Non-teaching (non-certified) personnel _____ Yes _____ No _____ One-half day or less _____ One day or more _____ College credit	_____	

But this information only tells us whether staff inservice occurred, not what training was provided, to whom or how well the training was received. The actual training sessions are fairly easy to evaluate, depending upon the desired information. Minimally, you'll want to know who participated in the training, what topics were covered, when it was conducted, and how well the training sessions went. Keep in mind that how well a workshop goes does not always equate directly with how effective it was. Individuals' opinions of a workshop or even their opinions of how much they learned, do not necessarily indicate how much they'll retain or apply in the future.

The problem of diminishing returns, sometimes called "attenuation of effect," is commonly observed in relation to staff training. Let's say your school health plan calls for training all elementary teachers to identify and refer students involved in substance abuse. But not all the teachers attend the inservice. Of those attending, some don't understand the procedures. Others are reluctant to use the procedures. Others claim to be using the procedures, but are passively resisting the plan. Over time, those who do use it leave the school for various reasons. Obviously, monitoring staff development effectively will take more than handing out an opinion survey at the close of workshop activities. Though participants' initial reactions to a workshop may provide some valuable insights, assessment of participants' knowledge and followup on their application of concepts is necessary. We need more than evidence that participants were entertained; we need to know what

they actually learned, and how much they are putting to practical use. Followup is essential if we are to gain a complete and accurate picture of staff development effectiveness.

Thus, we come to the third part of monitoring staff: The assessment of the extent to which they are implementing the school health plan. Let's look at the implementation of health instruction, health services and an overall healthy environment, as they are practiced by the school staff. The implementation of health instruction by the staff is fairly well documented in the school. Records such as lesson plans are maintained to demonstrate that instruction was provided as intended. By analyzing these records over time, we can track the quality, scope and intensity of instruction and see whether it is improving. But how do you measure the quality, scope and intensity of instruction?

Monitoring focuses on the degree to which staff have implemented the school health plan.

Let's start with intensity. Essentially, this is a measure of the "amount" of instruction per student: hours per week, weeks per year, and student-teacher ratios are indicators of intensity. A more indepth look at intensity might entail measures of time on task.

Scope also is fairly easy to measure. Scope is the breadth and depth of instruction. How much detail is being provided to the student? Lesson plans provide a general measure. A content analysis of the curriculum would provide a more detailed measure. To quantify this measure for comparison purposes, you might want to use "percent of planned lessons actually taught."

Measuring quality is a little trickier, since educators don't necessarily agree on what is involved in quality instruction. However, you know that you are looking at quality instruction when it successfully engages students in learning on a sustained basis. The more learning that occurs in the time available, the better the quality of instruction. Still, specifically defining quality teaching remains an elusive task. You might begin with the locally accepted definition of the qualities of an effective teacher. In addition, we feel that the congruence between the teachers' instructional approach and the learning styles of students, along with the congruence between the teacher's instructional approach and the learning objectives of the curriculum, will be important factors in measuring instructional quality.

Quality, scope and intensity of instruction are reviewed during monitoring process.

For example, health instruction is relatively unique in that its learning objectives may include expectations for students' decision making skills, interpersonal communication skills, and specific health practices, as well as a wide range of cognitive and affective skills. Therefore, students should have the opportunity to demonstrate and practice skills in the classroom, not just accumulate knowledge.

Evaluating the effectiveness of instructional quality requires both a description of standards and a judgment of how well teachers adhere to these standards. The description of instructional quality should be based upon mutually agreed upon definitions of desirable instructional characteristics or behaviors. These characteristics or behaviors can then be

translated into classroom observation scales for rating instructional processes. Judgment is required to determine whether instructional quality is improving. Because classroom observations are influenced by a variety of factors, including teachers' fear of evaluation, it is suggested that teachers be informed about the nature of the ratings and their intended use. Once teachers are well acquainted with the purposes and functions of various evaluation activities, you can use repeated observations (e.g., monthly) to acclimate teachers to the process and to provide a sound basis for identifying trends.

Communicating intent of evaluation mitigates teachers' concerns about evaluation process.

The evaluation of individual teacher effectiveness is not an intended outcome of the procedures described here. We suggest, therefore, combining the results of classroom observations across teachers to look for common trends in instructional quality. Where common weaknesses are apparent, staff training can be used to make improvements.

To evaluate instructional quality, we recommend that you read the following resource material:

Good, T.L., & Brophy, J.E. (1984). Looking in classrooms. New York, NY: Harper & Row Publishers, Inc. Availble from: Harper & Row Publishers, Inc., 10 East 53rd St., New York, NY 10022. Price: $14.95, paperback, 416 pp.

This book is designed to help teachers, principals and supervisors develop observation methods for evaluating classroom performance of teachers and students. Many examples of forms and procedures are provided.

Implementation of services by the staff can be monitored by documenting the nature of the services provided and the students served. Are services being provided as planned to the intended target group? Is the "mix of service" consistent with the plan?

That is, how much time are counselors devoting to prevention activities instead of crisis intervention activities? What is the reaction of the target group to the services? Such services are usually documented in student records, but great care must be taken to respect the rights of individuals by not violating the confidentiality of these records.

The use of a monitoring checklist to determine whether services comply with standards established in the school health plan is again the most common approach for assessing implementation. For example, the California Department of Education established criteria for evaluating school health services (Brophy, 1982). Portions of this document are reproduced on the following pages.

CRITERIA FOR EVALUATING THE SCHOOL HEALTH SERVICES PROGRAM

Criteria	Completely	To some degree (Percent) 75	50	25	Not at all	Changes needed
A. The health and development status of students is assessed and evaluated.	Steps to be taken to implement needed changes:					
1. A general health and developmental history is obtained on kindergarten students and new enrollees.						
2. First-grade students comply with the Child Health and Disability Prevention Program requirement.						
3. Teacher-school nurse conferences are conducted at least annually.						
4. A vision screening program is conducted for students in kindergarten and grades three and six, grades nine or ten, and for new enrollees and referrals.						
5. Color vision screening is conducted on boys in kindergarten or first grade.						
6. A hearing screening program is conducted for students in kindergarten and grades one, two, five, eight, and ten or eleven, and for new enrollees and referrals.						
7. Scoliosis screening is conducted for seventh-grade girls and eighth-grade boys.						

Brophy, H. (1982). Criteria for evaluating the school health service program. Sacramento, California: California Department of Education. (ED 216 000). Available from: ERIC Document Reproduction Service, 3900 Wheeler Ave., Alexandria, VA 22304, or by sending $1.50 to Publication Sales, California Department of Education, P. O. Box 271, Sacramento, California, 95814.

Criteria	Completely	To some degree (Percent) 75	50	25	Not at all	Changes needed
B. Health services personnel inform and advise parents and appropriate school personnel of the results of health assessments.						
1. Results of health assessments are reported to parents and pertinent school personnel.						
2. Students with suspected health problems are referred to an appropriate source of health care, and followup continues until the student receives care.						
C. The school nurse recommends necessary school adjustments for students with health problems.	Steps to be taken to implement needed changes:					
1. The regular school program is modified to accommodate the students' individual needs; i.e., preferential seating, shortened schcol day, and special bus passes.						
2. Students are referred by the school nurse for special education as needed.						
3. Arrangements are made for home/hospital instruction as indicated.						
D. The school nurse periodically reviews the health status and health maintenance plans of students with health problems.	Steps to be taken to implement needed changes:					

Criteria	Completely	To some degree Percent 75	50	25	Not at all	Changes needed
1. The school nurse reassesses the health status of students at least annually by						
a. Consulting with the classroom teacher regarding the students' progress.						
b. Conferring with the parents or guardians regarding the students' health.						
c. Consulting with the students' source(s) of health care.						
2. The school nurse updates the students' health maintenance plans as needed.						
E. The school nurse provides individual or group health counseling to students, parents, and teachers to effect behavioral change.	Steps to be taken to implement needed changes:					
1. The school nurse counsels students, school personnel, and families regarding health problems.						
2. Case conferences are held to assist pupils with special health problems to make the best possible personal and social adjustments.						
F. The school nurse assists in the appropriate special education placement of individuals with exceptional needs and provides designated health-nursing services.	Steps to be taken to implement needed changes:					
1. "Informed Consents for Assessment" are obtained and "Parents Rights" are explained.						

Criteria	Completely	To some degree Percent 75	50	25	Not at all	Changes needed
2. When students are being considered for special education placement, the school nurse conducts a special health assessment which includes a developmental and health history, home environment assessment, neurological assessment, and a review of all pertinent medical information.						
3. The school nurse prepares a report for the individualized education program (IEP) team.						
4. The school nurse serves on the IEP team.						
5. The school nurse participates in the review and update of the IEP at least annually.						
6. The school nurse is responsible for writing and implementing the IEP goals for "standardized procedures" for the administration of "specialized physical health care services."						
G. The health services program includes prevention and control of communicable disease.	Steps to be taken to implement needed changes:					
1. All students comply with state legal requirements regarding immunizations.						
2. The school nurse interprets and implements policies and procedures concerning communicable disease.						
3. The school nurse administers immunizations in accordance with "standardized procedures."						

Criteria	Completely	To some degree Percent 75	50	25	Not at all	Changes needed
H. Health services personnel establish and maintain standards to minimize the effects of accidents and illness in school.	Steps to be taken to implement needed changes:					
1. Written policies and procedures for first aid and emergency care are provided to all school personnel.						
2. First aid is administered promptly to injured or ill pupils by the first person on the scene.						
3. The school nurse is available for consultation in cases of accident or illness.						
4. Phone numbers of parents and physicians are on file for each pupil to facilitate notification in case of injury or illness.						
5. The school nurse provides periodic staff development on up-to-date first-aid procedures for all school personnel.						
6. Fully equipped first-aid kits are available in strategic locations on each campus and for field trips.						
7. First-aid equipment, such as stretchers and splints, is readily accessible.						
8. Accidents are analyzed to determine causes, and safety hazards are reported to the appropriate administrator for remedial action.						
I. The school nurse practitioner (SNP) provides primary health care to selected individuals.	Steps to be taken to implement needed changes:					

Criteria	Completely	To some degree Percent 75	50	25	Not at all	Changes needed
1. Criteria and priorities are developed for selection of individuals to be examined.						
2. The SNP identifies and manages specific conditions in accordance with "standardized procedures."						
3. The SNP reports findings and develops a health care or case management plan.						
J. The school nurse assists in promoting the optimum health of the school staff.	Steps to be taken to implement needed changes:					
1. The school nurse provides leadership in the development, periodic revision, and enforcement of school district policies regarding staff health and safety.						
2. The school nurse orients school personnel regarding district staff health and safety policies.						
3. The school nurse counsels individual staff members regarding health problems and provides first aid as needed.						
4. The school nurse provides staff development programs and distributes current information concerning pertinent health issues.						
K. School health personnel assist in the provision of a safe and healthful school environment.	Steps to be taken to implement needed changes:					
1. School health personnel participate in the development and periodic revision of district policies regarding environmental health and safety.						

Criteria	Completely	To some degree Percent 75	50	25	Not at all	Changes needed
2. School health personnel assist administrators in achieving compliance with legal requirements.						
L. School nurses participate in the planning and implementation of a comprehensive health education program.	Steps to be taken to implement needed changes:					
1. The school nurse serves on curriculum development committees.						
2. The school nurse stimulates the incorporation of health instruction in the school curriculum and in each classroom.						
3. The school nurse searches out, evalutes and recommends new materials and community resources.						
4. The school nurse serves as a resource to teachers and presents individual lessons in the classroom.						
M. The school nurse serves as the school liaison to community agencies and medical and dental care providers.	Steps to be taken to implement needed changes:					
1. The school nurse maintains current information regarding community resources and referral procedures.						
2. The school nurse serves on community committees or boards and promotes cooperation, communication and understanding among community resources and schools.						

Criteria	Completely	To some degree Percent 75	50	25	Not at all	Changes needed
N. The school nurse participates as a team member in the development, implementation, and periodic evaluation of policies and procedures related to critical health issues, including substance abuse, adolescent pregnancy, veneral disease, child abuse, and the like.	Steps to be taken to implement needed changes:					
1. The school nurse assists in the identification and documentation of the scope of the problems.						
2. The school nurse participates in the development, review, evaluation, and revision of policies and procedures that apply to critical health issues.						
3. The school nurse serves as a team member to implement the policies and procedures.						
O. School health personnel refer families to social services when needed.	Steps to be taken to implement needed changes:					
1. School health personnel facilitate family contact with local community resources.						
2. School health personnel assist families in obtaining free or part-pay health services.						
P. The student health record is a mandatory component of the student's cumulative school record.						

Criteria	Completely	To some degree: Percent: 75	50	25	Not at all	Changes needed
1. A health record is initiated for each student upon enrollment.						
2. Individual student health records are transferred, retained, or destroyed as required by law and regulations.						
3. The "California School Immunization Record" is completed for each student and is a "mandatory permanent student record."						
4. Required and pertinent health information is recorded on the individual student's health record.						
5. Confidentiality of and rights of access to individual student health records are observed as required by law and regulations.						
Q. The school health services program is evaluated at least annually in terms of established objectives.	Steps to be taken to implement needed changes:					
1. There is an established procedure for compliance in analyzing health services data.						
2. The health services program is evaluated to determine:						
a. Compliance with legal requirements.						
b. Program effectiveness.						
c. Program needs.						
d. Staffing patterns.						
3. A report on the school health program is submitted annually to the appropriate district administrators and the school governing board.						

Similar expectations for school health can be established and monitored for other staff, such as bus drivers, custodians, food service workers, and counselors. Your school health plan should be the basis for monitoring. An excellent example of such a monitoring form has been recently developed through a joint effort of representatives from the National Association of State School Nurse Consultants, American School Health Association, American Nurses Association, National Association of School Nurses, Inc., and National Association of Pediatric Nurse Associates and Practitioners. The guide is based on the standards for school nursing practice. An Evaluation guide for school nursing practice designed for self and peer review (1985) is available from the National Association of School Nurses, Inc., P.O. Box 1300, Scarborough, ME 04074. The price is $3.00.

One common method for evaluating school programs is to have students complete surveys concerning their satisfaction with the services. Client satisfaction is one relevant criterion for assessing implementation and for collecting ideas for revising the school health plan. However, a student questionnaire eliciting opinions about the program should not be the sole basis for assessing implementation.

Finally, let's look at the overall effect of the staff on the school environment. As part of the school health plan, are school staff setting a healthy example for students? Is the school a positive environment for learning and do staff model positive health practices?

Assessing school climate is somewhat more difficult because this dimension of the learning environment is hard to define in measurable terms. As Anderson points out in her article, there are a number of alternative definitions of climate in the literature, but some common foundations do exist:

> (a) Schools do possess something called climate, unique to each organization; (b) such differences, while discernable, are elusive, complex, and difficult to describe and measure; (c) climate is influenced by, but not a proxy for, particular dimensions of the school such as student body characteristics, or classroom processes; (d) climate affects many student outcomes, including cognitive and affective behavior, values, and personal growth and satisfaction, and (e) understanding the influence of climate will improve the understanding and prediction of student behavior (Anderson, 1982).[5]

Evaluating school climate calls for use of standard school records, surveys, observations, etc.

If this is true, then school climate must be evaluated with care, beginning with a reasonable definition of what school climate means to the team and how it relates to the school health plan. There are several approaches to the measurement of school climate. Each approach organizes school climate in a different way, so choose the methods which are most consistent with your school's view.

General school indicators, as described by Ellsworth and Rickard (1978), consist of data already kept by the school. Attendance, tardiness and disciplinary rates, for example, can be documented over time as indicators of school climate. Rather than just "fishing" for data that look interesting or are convenient, Kelley (1981) provides guidelines for planning an

[5] Copyright 1982 by the American Educational Research Association. Reprinted with permission.

audit of school climate. Structured observation, as described by Sagor (1981), is a simple, but time consuming approach for collecting indepth information about school climate.

Staff surveys, as listed by Anderson (1982), provide a snapshot of the school personnel's perceptions of the organizational climate. Is there a high level of trust? How are decisions made? Is communication open, and does it flow both up and down through the organization's structure?

Student surveys, as listed by Anderson (1982), provide an appraisal of students' attitudes toward the school environment. Is there a strong sense of school pride? What attitudes do students display toward learning? What is the nature of peer relationships? Do students hold teachers in high regard?

Both observations and surveys rely upon "perceived feelings," which are easily influenced by a variety of factors in the school. Because the results from such measures may fluctuate, repeated use of multiple measures is suggested. That is, use at least two different methods of assessment or administer the measure more than one time, so that you can be reasonably assured that you're evaluating a stable characteristic.

A positive sc. . climate of the school is an important aspect of a health, school environment. Allen and Ketcham (1981) have expanded this concept to talk about the health of the "school culture" as a whole. This concept not only focuses upon the norms for interpersonal behavior promoted by staff and students, but also other health related practices. They have

developed a School Culture Inventory which looks at enjoying physical fitness, eating well, taking care of ourselves, enjoying life, developing positive human relationships and being part of the world. The survey is highly wellness oriented, providing an example of positive approaches to school health promotion. We have adapted the survey and included it on the following pages.

The School Culture Inventory

Listed below are a variety of alternatives for you to consider in implementing school health. It is not expected that all items will be appropriate for all schools. Check the degree to which the school is currently promoting the following activities.

To What Degree Are We In Our School:	Yes, Always	Yes, Usually	Yes, Sometimes	Yes, But Rarely	No, Not At All
A. Enjoying Fitness					
1. Actively, constructively, and consistently supporting students and staff by providing opportunities to engage in a regular, planned program of physical exercise?	4	3	2	1	0
2. Encouraging people to walk or ride bikes rather than use motorized vehicles when practical?	4	3	2	1	0
3. Encouraging all staff members to adopt a program of regular physical exericse?	4	3	2	1	0
4. Developing programs which underscore the importance of regular aerobic exercise and which explain the dynamics involved (e.g., pulse rate, blood pressure, respiratory capacity, circulation, cell nourishment)?	4	3	2	1	0
5. Teaching students and staff various stretching and flexibility exercises?	4	3	2	1	0
6. Providing films and other resources which explain the nature and importance of physical fitness?	4	3	2	1	0
7. Creating a climate in which regular exercise is valued and enjoyed?	4	3	2	1	0
8. Requiring all students to demonstrate competency in health and wellness?	4	3	2	1	0

Adapted from Allen, R., & Ketcham, M. (Eds.). (1981). A school program for a healthier America: Educators' guide. Montclair, N.J. YMCA of Frost Valley. (ED 233 837). Available from: ERIC Document Reproduction Service, 3900 Wheeler, Ave., Alexandria, VA 22309.

		Yes, Always	Yes, Usually	Yes, Sometimes	Yes, But Rarely	No, Not At All
9.	Providing services for staff in the areas of health and wellness?	4	3	2	1	0
B.	Eating Well					
1.	Actively, constructively, and consistently supporting students and staff in their efforts to maintain nutritional eating patterns?	4	3	2	1	0
2.	Limiting the amount of sugar, salt, saturated fat, chemical additives, preservatives, and refinements in foods prepared or otherwise offered at school?	4	3	2	1	0
3.	Providing whole grain breads as an alternative to white bread and encouraging their use?	4	3	2	1	0
4.	Providing honey as an alternative to sugar and encouraging its use (or refraining from the use of any additive sweetener)?	4	3	2	1	0
5.	Discouraging the use of caffeine through coffee, tea, cola, etc.?	4	3	2	1	0
6.	Using fresh fruits and vegetables rather than canned and providing fresh and uncooked fruits and vegetables daily?	4	3	2	1	0
7.	Using whole wheat rather than white flour and pasta in baking recipes?	4	3	2	1	0
8.	Using whole grain brown rice instead of enriched white rice in recipes?	4	3	2	1	0
9.	Limiting the amount of red meats served, substituting fish and poultry meats?	4	3	2	1	0
10.	Carefully steaming cooked vegetables instead of boiling in order to retain maximum nutrient value?	4	3	2	1	0

	Yes, Always	Yes, Usually	Yes, Sometimes	Yes, But Rarely	No, Not At All
11. Broiling meat and fish instead of frying?	4	3	2	1	0
12. Providing educational opportunities for staff in the areas of nutrition?	4	3	2	1	0
13. Providing assistance for food service personnel, including inservice training if necessary, in planning menus, purchasing foods, and preparing meals that are maximally nutritious?	4	3	2	1	0
14. Provide opportunities for students and staff to learn how to plan and prepare nutritious meals/snacks.	4	3	2	1	0
15. Limiting or eliminating the amount of "junk" food (e.g., sugar candy, soda, popsicles) sold at school?	4	3	2	1	0
16. Discouraging parents from sending lunches from home containing sweets and other "junk" foods?	4	3	2	1	0
17. Providing staff and students with films and other resources explaining the nature and importance of good nutrition?	4	3	2	1	0
Taking Care of Ourselves					
1. Actively, constructively, and consistently supporting students and staff in their efforts to take care of their physical health and well-being?	4	3	2	1	0
2. Discouraging smoking by staff members and limiting its practice to specific places (separate smoking and non-smoking lounges)?	4	3	2	1	0
3. Encouraging responsible use of medicinal drugs and alcohol and prohibiting the use of illegal drugs?	4	3	2	1	0

	Yes, Always	Yes, Usually	Yes, Sometimes	Yes, But Rarely	No, Not At All
4. Requiring adequate medical examinations of staff and students?	4	3	2	1	0
5. Providing health care facilities and personnel capable of responding to health problems in the school setting while emphasizing programs of preventive medicine?	4	3	2	1	0
6. Promoting safety awareness with frequent reviews of safety guidelines by teachers with students?	4	3	2	1	0
7. Prohibiting the taking of unnecessary, unsafe risks?	4	3	2	1	0
8. Encouraging the use of seatbelts in all vehicles?	4	3	2	1	0
9. Educating students and staff in basic first-aid techniques?	4	3	2	1	0
10. Fostering an awareness among students and staff of the importance of personal cleanliness and health care?	4	3	2	1	0
11. Providing films and other resource materials related to self-care?	4	3	2	1	0
12. Supporting the role of school health care staff in the promotion of health and wellness?	4	3	2	1	0
D. Enjoying Life					
1. Actively, constructively, and consistently supporting the attempt of students and staff to choose and plan an enjoyable lifestyle?	4	3	2	1	0
2. Helping students and staff examine their personal values and beliefs and act on them?	4	3	2	1	0

	Yes, Always	Yes, Usually	Yes, Sometimes	Yes, But Rarely	No, Not At All
3. Eliminating unnecessary stress through overscheduling, inadequate organization, continuous pressure, crisis responses to problems, unnecessary rules, etc.?	4	3	2	1	0
4. Providing sufficient time for students and staff to "unplug" from the schedule?	4	3	2	1	0
5. Providing an opportunity for students and staff to learn and experience relaxation techniques and ways to manage stress effectively?	4	3	2	1	0
6. Providing an environment in which feelings can be experienced and shared in a responsible, supportive fashion?	4	3	2	1	0
7. Helping students and staff learn how to handle problems effectively?	4	3	2	1	0
8. Providing an opportunity for students and staff to examine the goals in their lives and to reflect on whether their behavior reinforces their values and goals?	4	3	2	1	0
9. Providing an opportunity for students and staff to deal with issues of aging and death and to ask how these can give meaning and purpose to life?	4	3	2	1	0
Developing Positive Human Relationships					
1. Actively, constructively, and consistently supporting the development of strong, positive human relationships?	4	3	2	1	0
2. Helping students and staff to appreciate individual differences?	4	3	2	1	0
3. Facilitating cooperative decision making on all levels?	4	3	2	1	0

		Yes, Always	Yes, Usually	Yes, Sometimes	Yes, But Rarely	No, Not At All
4.	Balancing competitive activities with cooperative ones (e.g., "New Games," group initiative exercises), emphasizing the importance of that balance, and defining healthy versus unhealthy competition?	4	3	2	1	0
5.	Promoting, developing, and practicing good communication and active listening skills among staff and students?	4	3	2	1	0
6.	Teaching and facilitating approaches to positive ("all-win") conflict resolution?	4	3	2	1	0
7.	Assisting students and staff with concerns and questions they may have in the area of interpersonal relationships?	4	3	2	1	0
F.	Being Part of the World					
1.	Actively, constructively, and consistently supporting the awareness, sensitivity, and efforts of students and staff to develop a feeling of community (both locally and globally) and respect for the natural environment?	4	3	2	1	0
2.	Creating and implementing school policy from the frame of reference of the school as a community?	4	3	2	1	0
3.	Helping to preserve and protect the environment by practicing and teaching about the conservation of natural resources?	4	3	2	1	0
4.	Providing opportunities for students and staff to experience natural, outdoor environments as part of the educational experience (e.g., environmental education experiences at a school setting)?	4	3	2	1	0

Here are the tasks which need to be accomplished to monitor staff implementation of the school health plan.

Task	Person Responsible	Deadline for Completion
a. Review school health plan to identify key features of staff-related strategies.		
b. Establish standards for judging compliance to the key features--consider quality, scope and intensity.		
c. Establish method of collecting monitoring information--consider adapting existing forms.		
d. Schedule and assign monitoring tasks.		
e. Revise school health plan based on monitoring findings.		

E. Are you monitoring the school facilities?

Appraisal of the physical environment calls for direct observation coupled with laboratory testing. For example, one important factor in the environment is water quality. Direct observation of the school's water supply can tell us how the water looks, smells and tastes, but a laboratory analysis is necessary to detect bacterial (e. coli) or chemical contaminants. Direct observation and testing are also used for fire inspections, bus safety inspections, food service inspections and other health/safety standards. Checklists are commonly used to record the results of facility inspections systematically, but professional judgment is critical. Gathering quality information, even with the aid of checklists, requires a well-trained observer. Therefore, if you are in doubt about conducting a facility inspection, secure the services of a technician to help you. State agencies may have personnel available in your area for fire, electrical, bus, sanitation, atmospheric, security and other health-related inspections.

Facilities monitoring requires technical knowhow.

As an example, the school environment section of A Self-Appraisal Checklist for School Health Programs (not dated) is provided on the pages which follow. Copies of the checklist may be obtained from the Ohio Department of Education, Elementary and Secondary Education Section, Room 1005, 65 South Front Street, Columbus, Ohio 43215. There is no charge, but supply is limited.

Healthful School Living

f the students and school personnel is affected by the environment in which they work and play. Environment influences the health, the habits, , the comfort, the safety and the working efficiency of school personnel. The environment is the responsibility of the school administration, aintain it is the responsibility of all school personnel, and inspecting for environmental deficiencies is the statutory responsibility of the local f health.

S AND RECOMMENDED	WHAT ARE WE DOING	COMMENTS, PRIORITIES, PROPOSED PLANS, TIME SCHEDULE
ual inspections of the school facili- nade by the local health department s and school health personnel l staff – school administrators).	A. Date of School Inspection: School Official Name and Title: _____ 1. Progress of inspection recommendations: *Copy of "Sanitation in The School Environment" No.2116.32 is available from the Ohio Department of Health.	
ual inspections of the school food peration (if provided) are made by health department's sanitarian and rsonnel (cafeteria supervisor - school rators).	B. Date of Food Service Inspection: School Official Name and Title: _____ 1. Progress in correcting (remedying) inspection violations:	From: Ohio Association for Health, Physical Education and Recreation. (Not dated). A self-appraisal checklist for school health programs. Columbus, OH: Ohio Department of Education/Ohio Department of Health.
e has been established to insure that n reports are properly interpreted authorities.	C. The inspection results are reviewed and explained with recommendations to the school officials at the time of the inspection.	

ARDS AND RECOMMENDED ICES	WHAT ARE WE DOING	COMMENTS, PRIORITIES, PROPOSED PLANS, TIME SCHEDULE
	School Officials consulted: 1. Superintendent or Principal ____ 2. School Administrator ____ 3. Custodial Supervisor ____ 4. Cafeteria Supervisor ____ 5. Others ____	
ies of the inspection reports are sent to appropriate persons.	D. Copies of the inspection reports are sent to: 1. Board of Education ____ 2. School Administrator ____ 3. Health Supervisor/Coordinator ____ 4. Custodial Supervisor ____ 5. Cafeteria Supervisor ____ 6. Others ____	
s for any new physical structure, (includ- all major improvements) are submitted to appropriate agencies prior to construction.	E. Plans are submitted to: 1. State Department of Industrial Relations ____ 2. State Plumbing Unit, Ohio Department of Health ____ 3. Local Health Department ____ 4. Others as required ____	
odic in-service education programs spon- d jointly by the health department and school system for custodial and food ser- employees are recommended.	F. Check the in-service education programs for custodial and food service employees during the last 12 months. 1. A program conducted by the Health Department for custodial and food service employees. Yes ____ No ____ 2. Personnel attended workshop in Columbus conducted by the Department of Education. Yes ____ No ____ List future plans for in-service education programs for the next 12 months.	

2

NDARDS AND RECOMMENDED CTICES	WHAT ARE WE DOING	COMMENTS, PRIORITIES, PROPOSED PLANS, TIME SCHEDULE
he school environment should stimulate arning and the development of good sani-tion practices such as: . Food handling instructions for students assisting in the lunch room. . Students to learn and appreciate good food handling practices. . Maintaining a more attractive lunch room. . Proper storage of food.	G. Check any activities initiated by school officials which serve to motivate environmental sanitation practices. 1. Enlists the help of student patrols to make inspections of the environment to check for good sanitation and safety practices. Yes ____ No ____ 2. Food handling class conducted for students assisting in the lunch room. Yes ____ No ____ 3. Group of students works with lunch room personnel in improving attractiveness of lunch room. Yes ____No ____ 4. Invites local sanitarian to discuss sanitation and safety practices to school personnel and/or health classes. Yes ____ No____ 5. Others (list):	
School Environment		
ent prevention is a vital part of semi-annual ctions conducted by local health sanitarians school health personnel. These inpections considerable emphasis on maintaining, plan-and developing safety practices within the l environment and especially at specific ons.		
ne sanitarian's inspection of safety of the vironment should include the following ajor areas: School grounds Parking area Playground and equipment Athletic field and equipment Floor areas, stairs, ramps Classrooms Dressing/shower rooms Gymnasium Vocational areas/chem labs/home economics rooms	A. 1. Parking kept away from playground equipment? Yes____ No ____ 2. Playground equipment maintained in good repairs? Yes ____ No ____ 3. Has soft, absorbent surface been provided around playground equipment? Yes ____ No ____ 4. Are floor surfaces kept clean, free of tripping, slipping hazards? Yes ____ No____ 5. Classrooms arranged for best traffic pattern, least amount of congestion? Yes ____ No ____	

S AND RECOMMENDED	WHAT ARE WE DOING	COMMENTS, PRIORITIES, PROPOSED PLANS, TIME SCHEDULE
afeteria/kitchens ms ting equipment/exits emergency rooms	6. Classroom furniture kept in good repair, adequate lighting provided? Yes ____ No ____ 7. Adequate supervision provided for organized/unorganized activity on the school grounds and in the gymnasium? Yes ____ No ____ 8. Necessary safety precautions taken in vocational shop, chem labs, home economics areas, i.e.: *protective eyeware provided Yes ____ No ____ *faucet for eye lavage if chemically burned Yes ____ No ____ *fire extinguisher close to heating elements Yes ____ No ____ 9. In-service safety programs presented for food service personnel in school kitchen? Yes ____ No ____ Date of last in-service workshop? Projected date for next food safety program? 10. Restroom floors kept dry, free of debris? Yes ____ No ____ 11. Fire extinguishers checked monthly to determine operability? Yes ____ No ____ Date of last fire extinguisher check? 12. Proper class of extinguishers provided according to type of fire hazard, i.e., electrical, paper, chemical, etc.? Yes ____ No ____ 13. Health department sanitarian meets with school personnel or safety committee to discuss findings of the school inspection and needed or recommended corrections? Yes ____ No ____ Comments:	

S AND RECOMMENDED	WHAT ARE WE DOING	COMMENTS, PRIORITIES, PROPOSED PLANS, TIME SCHEDULE
ctive school safety program encom- any areas within the school system: ant awareness to potential hazards of products being introduced into the environment. l training, and drills of school bus and children in school bus safety ces along with regular school vehicle tions. l safety concerns integrated into priate curriculum designs. rills education	B. Check any special safety in-service education programs during the past school year for: Bus Drivers Yes ____ No ____ Lunch room personnel Yes____ No ____ Teachers Yes____ No ____ Custodians Yes____ No ____ Safety Patrol Yes____ No ____	
oncerns should be integrated into the ducation curriculum.	C. Check safety concerns that have been integrated into the curriculum this past year, such as: 1. Accident Etiology Yes____ No ____ 2. Bicycle Yes____ No ____ 3. Home (urban/ suburban) Yes____ No ____ 4. Home (rural) Yes____ No ____ 5. Toy Safety Yes____ No ____ 6. Pedestrian Safety Yes____ No ____ 7. Vacation Yes____ No ____ 8. Poisons Yes____ No ____ 9. Firearms and Hunting Yes____ No ____ 10. Automobile and seat belt Yes____ No ____ 11. Pets Yes____ No ____ 12. Fires Yes____ No ____ 13. Athletic and playground Yes____ No ____ 14. Water and boating Yes____ No ____	
ition Program		
a food service provided in the school pupils are encouraged to participate.	A. Is there a food service program in your school? Yes ____ No ____	
ch served meets the National "Type dard.	B. Does it meet National "Type A" Standard? Yes ____ No ____	

DARDS AND RECOMMENDED TICES	WHAT ARE WE DOING	COMMENTS, PRIORITIES, PROPOSED PLANS, TIME SCHEDULE
en though it is legal to sell candy and sweet-ed beverages in the school, it is recom-nded that this practice not be permitted ring school or lunch hours. Sale of such ns is in direct competition with a good ch program.	C. Does your school sell: 1. Candy Yes ____ No ____ 2. Soft drinks Yes ____ No ____ 3. Chocolate milk or drink Yes ____ No ____ 4. Other snack items Yes ____ No ____	
e school lunch program should be utili-as a learning laboratory for good nutri-n in a child's life.	D. Check any of these activities related to lunch room and nutrition that are utilized in the health education program. 1. Classroom units Yes ____ No ____ 2. Pupils given an opportunity to evaluate menus to determine if they meet "Type A" School Lunch requirements. Yes ____ No ____ 3. Pupils or art classes make posters for the lunch room. Yes ____ No ____ 4. Classes plan menus and solicit the assistance of head cook in serving it to students. Yes ____ No ____ 5. A class makes a survey of eating habits of students in lunch room to see foods rejected or wasted. Yes ____ No ____ 6. Class tours the kitchen to observe dish washing, storage of food, etc. and to discuss why certain practices are necessary. Yes ____ No ____	
ool Food Service Personnel should be re-ed (expenses to be paid by the Board of cation) to attend workshops and confer-s sponsored by the State Department of cation for the lunch room workers.	E. In this school year, how many school lunch personnel attended the workshops and conferences sponsored by the State Department of Education? _____ 1. How many attended local workshops? _____	

SCHOOL ENVIRONMENT INSPECTION FORM

Health District

Name of School _____ Address _____
Clerk. Board of Education _____ Address _____
Superintendent or Principal _____ Address _____
Custodians _____

☐ Elementary
☐ Junior High
☐ Senior High
Enrollment _____

No. Classrooms _____
Food Service ☐ Yes ☐ No
Swimming Pool ☐ Yes ☐ No

☐ Municipal Sewage
☐ Public Sewage
☐ Municipal Water
☐ Public Water

Items marked by (x) are explained below with recommendations.

I Surroundings
- A. Location ☐
- B. Grounds, Walkways and Driveways ☐
- C. Playground Equipment ☐

II Building
- A. Structure ☐
- B. Floor Cleaning and Repair ☐
- C. Walls and Ceiling - Cleaning and Repair ☐
- D. Doors and Windows ☐

III Heating and Ventilation
- A. Thermostat and Thermometer Each Classroom ☐
- B. Temperature and Humidity ☐
- C. Ventilation and Dust Control ☐

IV Lighting
- A. Adequate Artificial Lighting ☐
- B. Maintenance of Fixtures ☐
- C. Quality and Proper Use of Lighting ☐

V Water Supply
- A. Source, Development and Treatment ☐
- B. Pressure and Chemical Quality ☐
- C. Plumbing, Maintenance and Design ☐
- D. Drinking Fountains ☐

VI Toilet and Locker Room Facilities
- A. Cleaning, Repair and Adequacy of
  - 1. Rooms ☐
  - 2. Showers and Toilet Fixtures ☐
  - 3. Lockers and Modesty Equipment ☐
  - 4. Handwashing Facilities ☐
- B. Ventilation ☐
- C. Rest Room Supplies ☐

VII Waste Disposal
- A. Sewage System Operation ☐
- B. Sewage System Maintenance ☐
- C. Refuse and Garbage Disposal ☐
- D. Refuse and Garbage Storage ☐

VIII School Room Facilities
- A. Adequate Equipment and Furnishings ☐
- B. Maintenance of Equipment and Furnishings ☐
- C. Room Population (Overcrowding) ☐

IX Accident Prevention
- A. Traffic Safety ☐
- B. Fire Exits Marked, Adequate ☐
- C. Fire Fighting Equipment ☐
- D. Rooms and Halls Free of Hazards ☐
- E. Stairways and Playgrounds Free of Hazards ☐
- F. Properly Equipped Emergency Room ☐

X Insect and Rodent Control
- A. No Evidence of Insect Infestation ☐
- B. No Evidence of Rodent Infestation ☐
- C Proper Control Procedures Used ☐

Recommendations:

_____ _____
Date Sanitarian

DOH 1933.32

Safety in the school is an important part of school health. A number of resource materials have been developed that can help identify and prevent health and safety problems in the school setting.

Centers for Disease Control. (1978, September). Health and safety in the school environment: A manual of recommended practice. (Publication #CDC 78-8368). Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control. Available from: Publications Activities, Center for Environmental Health, Centers for Disease Control, Atlanta, GA 30333. No charge, but supply is limited.

This manual provides a concise review of health related aspects of the school environment. Environmental standards for the school building are described along with suggested additional sources of information. Considerations include the planning of new schools, site selection, water supply, plumbing, sewage disposal, food service, illumination, thermal environment, acoustics, injury control, solid waste management, pest control and maintenance. The manual is quite readable and a valuable resource for planning an evaluation of the school facility.

Center for Occupational Research and Development, Inc. (1981). Safety and health in vocational education. Waco, TX: Center for Occupational Research and Development, Inc. (ED 213 828 - ED 213 834). Available from: ERIC Document Reproduction Service, 3900 Wheeler Ave., Alexandria, VA 22309.

A series of modules which identify methods for recognizing and preventing safety and health hazards in the various vocational education areas. Available from EDRS, address above.

Environmental Protection Agency. (1982, October). Asbestos exposure in buildings: Inspection manual. Washington, DC: Environmental Protection Agency. Available from: Public Information Center, Environmental Protection Agency, 401 "M" St., S.W., Room PM-211B, Washington, DC 20460. No charge.

This manual is designed for use in conjunction with Asbestos-containing materials in school buildings. The manual provides detailed guidelines for assessment of asbestos hazards and their control in buildings, particularly schools.

Environmental Protection Agency. (1984, July). Asbestos-containing materials in school buildings: A guidance document, Part I. Washington, DC: U.S. Environmental Protection Agency. Available from: Public Information Center, Environmental Protection Agency, 401 "M" St., S.W., Room PM-211B, Washington, DC 20460. No charge, but supply is limited.

This is a usable description of the health hazards associated with asbestos. It includes the steps a school district should take to identify asbestos-containing materials and protect students and school personnel from exposure.

McKenzie, J.F., & Williams, C.I. (1982, May). Are your students learning in a safe environment? The Journal of School Health, 52, 284-285.

To help teachers become more aware of the characteristics of a safe learning environment, the authors have developed a self-awareness checklist. The checklist includes questions about policies, supervision, maintenance, traffic patterns and emergency procedures, and gives a brief overview of classroom safety issues.

National Institute for Occupational Safety and Health. (1984, April). Manual of safety and health hazards in the school science laboratory. Cincinnati, OH: U.S. Department of Health and Human Services. Available from: Franklin D. Kizer, Rt. 2, Box 637, Lancaster, VA 22503. Price: $5.75.

This reference guide for high school science teachers identifies hazards associated with experiments in the areas of chemistry, the earth sciences, biology and physics.

Sommer, C. (1978, July). Safety standards plan for Middlesex County vocational and technical high schools. New Brunswick, NJ: Rutgers University. (ED 160 866). Available from: ERIC Document Reproduction Service, 3900 Wheeler Ave., Alexandria, VA 22309.

This vocational education safety standards plan outlines safety program objectives, policies for safe operation of vocational courses as well as plans for periodic inspections and maintenance of facilities and equipment. Identification and elimination of potential hazards and delineation of emergency procedures are specified along with recommended methods for providing and assessing student safety education.

Texas Education Agency. (1980). Safety practices for science. Austin, TX: Texas Education Agency Division of Curriculum Development. (ED 193 080). Available from: ERIC Document Reproduction Service, 3900 Wheeler Ave., Alexandria, VA 22309.

Designed to promote the use of safe, controlled investigation in science classrooms in Texas, this publication describes procedures to help teachers ensure the safety of all students in class and on field trips. Safety in the elementary science classroom and in secondary school science courses is discussed. Included are first-aid procedures, charts for safe storage of chemicals, and laboratory safety checklists.

U.S. Consumer Product Safety Commission. (1977). A guide to flammable products and ignition sources for elementary schools. Washington, DC: U.S. Consumer Product Safety Commission. (ED 147 286). Available from: ERIC Document Reproduction Service, 3900 Wheeler Ave., Alexandria, VA 22309.

This guide teaches proper methods for selecting, using, maintaining and disposing of flammable products and ignition sources such as matches, space heaters, extension and appliance cords, and flammable liquids. A list of thirty-one sources for additional information is appended.

U.S. Consumer Product Safety Commission. (1977). A guide to flammable products and ignition sources for secondary schools. Washington, DC: U.S. Consumer Product Safety Commission. (ED 147 285). Available from: ERIC Document Reproduction Service, 3900 Wheeler Ave., Alexandria, VA 22309.

This guide teaches proper methods for selecting, using, maintaining and disposing of flammable products and ignition sources such as matches, space heaters, extension and appliance cords, and flammable liquids. A list of thirty-one sources for additional information is appended.

U.S. Consumer Product Safety Commission. (1984). School science laboratories: A guide to some hazardous substances. (Stock No. 052-011-00243-7). Washington, DC: U.S. Consumer Product Safety Commission. Available from: Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Price: $2.25.

As a supplement to the National Institute for Occupational Safety and Health manual, this document lists chemicals that are explosive, carcinogenic, highly toxic and/or corrosive and that may be found in school science laboratories. Inventories of these substances are included for science instructors.

Here are the tasks for monitoring the school facilities as part of the implementation of the school health plan:

Task	Person Responsible	Deadline for Completion
a. Review school health plan to identify facility strategies.		
b. Select key features from the facility-related sections of the plan.		
c. Develop standards and methods for monitoring.		
d. Request technical assistance from state agencies for technical monitoring.		
e. Schedule and assign monitoring tasks.		
f. Revise school health plan based on monitoring findings.		

F. Have you drawn conclusions from the monitoring results?

So now the school health plan has been implemented and the degree to which it is being genuinely carried out is being monitored. Checklists are being routinely completed, documentation is being reviewed, interviews are being conducted, observations made and surveys filled out. What should you do with all the data?

Data from monitoring efforts provide answers to three basic questions.

Remember, the purpose of monitoring implementation was to answer three questions:

1. Are the activities or key features of the school health plan being implemented as intended?
2. If not, why aren't they occurring as planned?
3. What refinements to the school health plan are needed to achieve our goals?

To answer the first question, the steps are relatively cut and dried. Look at each activity in your school health plan. Based on the evidence collected during monitoring, ask the following questions: Is each activity currently being implemented? Was this true in the past? Do you have reason to believe it won't be true in the future? Is each activity being uniformly implemented from school to school or classroom to classroom?

What you are looking for are major exceptions or trouble spots. Exceptions will become apparent if you calculate averages from your monitoring results across time, activities and/or staff. Graph your results, as shown in the examples in Tables 8, 9 and 10.

Table 8
Results of Monthly Monitoring of
Health Lessons Being Taught

Table 9
Results of Annual Monitoring of
Teachers' Use of Fluoride Rinse Program

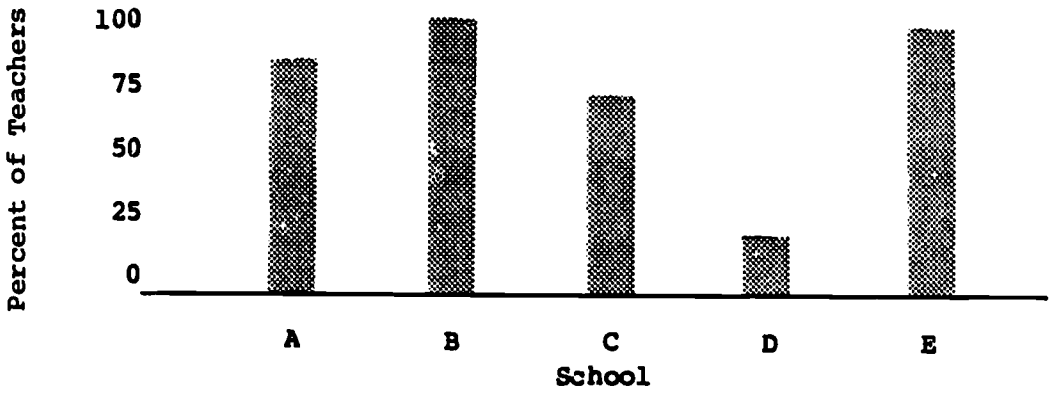
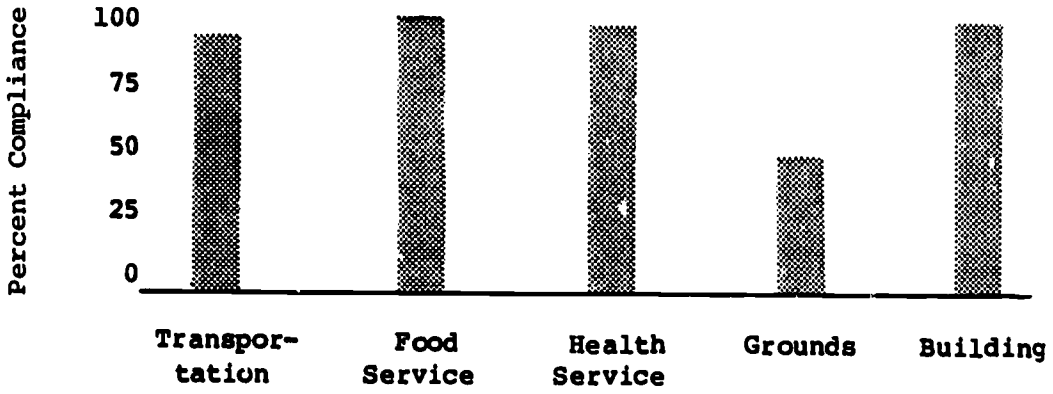


Table 10
Results of Annual Monitoring of
Compliance to Key Features in Health Plan



Tables 8, 9 and 10 each contain exceptions of interest. How do we know that they are exceptions? Because they deviate from the "norm." In Table 8, health lessons aren't being taught in the spring as often as the rest of the year. In Table 9, one school isn't using the fluoride rinse program as extensively as other schools. In Table 10, relatively fewer health standards affecting the grounds are being complied with (in comparison to other areas).

Displaying results can help identify trouble spots in implementation.

Once you know <u>where</u> implementation is a problem, then you can work on determining <u>why</u> it is a problem. This requires more open-ended forms of evaluation, such as interviewing or group discussion. At the same time information can be gained about <u>how</u> to refine the plan to resolve the problem.

Assessing the acceptance of school health activities requires some patience and encouragement. New procedures and facilities require people to change well-established habits. This takes time. Don't conclude that your school health plan doesn't work until it's been given a fair trial. Further, since activities in the school setting are very people oriented, we must understand that implementing any plan requires a combination of desired attitude and action. It is important to assess staff satisfaction (attitude) along with their actual behavior. People are motivated by preferences. If school personnel are satisfied with an activity--feeling that it is useful and productive--they are more likely to actually implement that activity. If they are dissatisfied with how or why an activity is to be used, they are

unlikely to work very hard at carrying it out. Because of this, surveys and interviews of staff by the school health improvement team may reveal valuable insights about the perceived utility of the health activity.

Here are the tasks for drawing conclusions from the monitoring results:

Task	Person Responsible	Deadline for Completion
a. Organize monitoring results by activity or key feature.		
b. Calculate averages across time (monitoring interval), across site (school or class) and across health goals.		
c. Graph trends to identify major exceptions.		
d. Conduct followup interviews/ discussions to identify problems and resolutions.		
e. Refine school health plan to account for problems.		

In Chapter IV we monitored the implementation of the school health plan and, we hope, were successful in carrying out the major portions of the plan, while revising the other portions. Now we are ready to look at the effectiveness of these school health activities. Chapter V provides strategies for assessing the outcomes of school health activities.

CHAPTER V

How to Assess the Effectiveness of School Health Activities

Through the previous three chapters of the manual, you have had a chance to look at the desirability, feasibility and fidelity of your planned school health activities. Now you are ready to consider effectiveness. For the present purposes, we will define effectiveness as the degree to which an activity leads to an intended benefit. This definition requires us to divide our evaluation into two steps--the measurement of the results and the determination of benefit.

Measuring results involves systematically and objectively describing the characteristics of interest. These characteristics may relate to students--their knowledge, attitudes, practices or physical states. Or you may wish to describe certain characteristics relating to your school's services or facilities. But while describing characteristics is a critical first step, it is not sufficient for evaluation. For example, knowing that a student can categorize assorted foods into the four food groups does not, in and of itself, indicate any derived benefit. We must also ask whether this behavior represents an outcome we've identified as important. In short, first we describe what's happening; then we judge the quality or benefit of what we see.

Assessing effectiveness begins with a systematic, objective description of relevant characteristics.

The specific criteria that you will use to determine benefit really depend upon the intended outcomes of the school's health promotion activities. Let's say, for instance, that your school has implemented a health education curriculum intended to reduce students' use of tobacco. What claim do we want to assert about

the potential benefits of this program? Beginning with the most immediate outcomes, we can claim student gains in knowledge about the effects of tobacco on the body. Taking this one step further, we could claim changes in students' attitudes about the use of tobacco. We might even claim changes in students' reported use of tobacco. If we wanted to be really bold, we could claim a reduction in the use of tobacco, and reductions in lung cancer and heart disease in the community as a whole.

This continuum of claims is based on our understanding of the way change takes place, beginning with knowledge and ending with behavior. Evaluators call this sort of continuum a causal model. We all have an idea of how cause and effect relationships work. We should also have an idea about how these cause and effect relationships diminish over time and distance as they're diluted by other actions taking place around us. Consider an example. In Developing Childhood Injury Prevention Programs: An Administrative Guide for State Maternal and Child Health Programs (1983), the authors describe a situation in which 100 students were asked to attend a class on injury prevention. However, only 66 students actually attended, and of these, only 44 comprehended the lesson. As a result of the instruction, 29 changed their behavior, but only 19 students maintained this behavioral change over time. And ultimately, only 13 applied the new behavior to prevent injury! In linking goals, activities and outcomes, you should consider this "attenuation of effect"--the relationship between activities and outcomes is not as strong as you may think. Be realistic in setting expectations for the outcomes which can be achieved by your activities.

We know that the less tangible the results, the more difficult cause and effect relationships are to document. If we have a causal model in mind for our school health promotion activity, it will help us to determine what claims we want to validate.

As a rule of thumb, you should begin with the most direct and immediate claims or outcomes. If immediate benefits cannot be directly documented, then it is doubtful that longer term, more pervasive effects can be validated. The farther we are from assessing direct effects in the school setting, the more difficult it is to document benefits of school activities.

Direct, immediate results are studied first; then longer-term, more pervasive ones.

Indeed, as mentioned earlier, health educators are notorious for making unsubstantiated claims for the long-term benefits of school activities. Since the purpose of evaluation is to provide information to improve decision making, then the claims we intend to make about benefits need to be substantiated by evaluative information. At this point the team should again review the evaluation questions posed at the end of Chapter I, Section D to confirm that the questions: (1) deal with the issue of effectiveness and (2) address direct and immediate effects.

The eleven sections which follow provide a process for determining the effectiveness of school health activities. The following questions are discussed:

A. Do you know what evaluation designs are appropriate for schools?

B. Do you know what kinds of outcomes could be measured?

C. Do you evaluate the quality of servide delivery?

D. Do you evaluate your students' health knowledge?

E. Do you evaluate your students' health attitudes?

F. Do you evaluate your students' health practices?

G. Do you evaluate the health status of your students?

H. Have you looked at other general indicators of students' health behavior, lifestyle and school performance?

I. Have you looked at costs when evaluating the effectiveness of the school health plan?

J. Do you know how to interpret the information collected?

K. Do you know how to report evaluation results effectively?

A. Do you know what evaluation designs are appropriate for schools?

If we are supposed to substantiate our claims and begin our assessment with the most immediate outcomes, how far should we go in documenting benefits? To answer this question we must consider two things. First, how important is it to know conclusively that your program caused the desired effect? Second, how much time and how many resources is the school willing to devote to the evaluation effort?

"How far should we go in documenting benefits?"

Basically, our evaluation evidence needs to be more conclusive when (a) the program cost is higher, (b) the risk to students is greater, (c) the number of students affected is larger, (d) we know less about the program, (e) the claimed benefits are greater, or (f) we want to make more generalizations about the use of the activity in other settings. In other words, the more serious the consequences of a wrong decision, the more certain you want to be about the information you are using.

How do we make evidence more conclusive? We do so by eliminating alternative possible explanations for the results. Controlled, randomized experiments are often conducted in professional evaluations to eliminate alternative explanations. However, from our perspective, we don't believe that a school should necessarily be in the business of controlled, rigorous experimentation--particularly when there may be some risks to students.

Green and Gordon (1982) advocate the use of less rigorous designs when the purpose of the evaluation is to determine how well a specific program works in a specific school setting. They call it evaluating for accountability: "When the purpose of evaluation is accountability, then the scientific rules of evidence are less important than the integrity of the program. The practitioner needs to show that some service has been delivered, but is not required to 'prove' that the service was solely responsible for a given effect." They offer six design choices in order of priority:

Six evaluation design choices are offered for schools to consider; three are commonly used.

1. The historical, recordkeeping approach, where longitudinal changes are documented via an ongoing record of trends in the school.

2. The periodic survey approach, where a special effort is made to assess trends in the school such as the priority setting activities we suggested in earlier sections.

3. The normative approach, where the results you get from periodic assessments are compared to the performance of other programs or students elsewhere.

4. The controlled-comparison, quasi-experimental approach, which involves the use of a control group for purposes of comparison.

5. The controlled-experimental approach, where students are randomly assigned to two or more activities so that the relative effectiveness of those activities can be compared.

6. The evaluative research project, where full-scale research designs are employed for special studies in your school. If you want to try this approach, we recommend hiring an evaluation consultant to help you set it up.

Let's look at the first three designs in greater detail, since they will be used most often in the school setting.

The historical recordkeeping approach utilizes existing records routinely collected by the school to document changes in services or student outcomes. Records are periodically charted to detect trends over time. For example, the absenteeism rate can be charted monthly to determine whether the school's attendance level is increasing, decreasing or relatively stable. But Roos (1975) cautions against the use of existing records for evaluating health programs because of:

1. Lack of agreement on how to consistently record information.
2. Incomplete records, or records that do not capture all the relevant information needs.
3. Incorrect or inaccurate recording of information.

If historical records are going to be used to demonstrate improvements resulting from the school health plan, then the team must be assured that the records contain information directly relevant to the objectives of the health plan and that the records are consistent and accurate.

Relevant and accurate records must be available for the historical recordkeeping approach to be useful.

The historical recordkeeping approach is a form of time-series design, where records are available over an extended period of time, both before and after implementation of the school health plan. Depending on the nature of the data, results are tabulated weekly, monthly, quarterly or annually. Then the data for each time interval is graphed to determine what change, if any, occurred at the time the school health plan was implemented.

If the existing recordkeeping system does not address the informational needs of the evaluation, or if the data required are needed at less frequent intervals, then the periodic survey approach is indicated. In the periodic survey approach, special efforts are made to collect data unique to the evaluation. While the time intervals are not as frequent as historical recordkeeping, the periodic survey approach will at least include one measurement before and one measurement after the implementation of the school health plan. Pre-post testing is an example of the approach. In determining how frequently to schedule assessments, the team should consider the nature of the school health activity to be implemented. Does the activity have a natural cycle in which its implementation is repeated? For example, health instruction may be cycled quarterly, by semester or annually. Health screening may be an annual process. At a minimum, there should be one measurement taken before and after this cycle. Additional measurements could be taken earlier, during the activity or later.

"Before" and "after" data are produced by the periodic survey approach.

The normative approach is based on the data collected in the previous two methods, but adds an outside source of data as a standard of comparison. The performance of the school is compared to other schools or some other source of local, regional or national data. This outside source of information provides an independent basis for judging the effectiveness of the school health plan. The normative approach requires that the measurement procedures be comparable and relevant to the

Measurement procedures must be comparable and relevant to project objectives in the normative approach.

objectives of the project. Before using this approach, the team should determine what methods were used to measure the norming group and what comparisons to the norm group really mean. For example, was there a program with similar objectives which served the norm group, or were there no comparable services at all? Thus, the real differentiation in this approach is whether normative standards are used for gauging effectiveness.

The standards of comparison a school might use in conducting a practical evaluation of the claimed benefit of a health activity are shown in Table 11. Basically, when we claim that the benefits of an activity are acceptable or satisfactory, then we need only measure outcomes once. We are not demonstrating improvement, only acceptable performance--in much the same way that students demonstrate a satisfactory level of knowledge or skill when they take an end-of-chapter test. On the other hand, if we claim that the benefits of an activity are better than those of something else, then multiple measures are needed. For example, pre- and posttesting students before and after a lesson enable us to demonstrate change or improvement. Or, we might test two groups of students to show that the performance of one group is <u>better</u> than that of another group. The way we state a claim (write our objectives) largely determines how we will judge the benefits of the results (evaluation design).

Table 11

Standards for Judging the Benefit of School Health Activities

Standard of Comparison	Evaluation Design
Objectives of school health improvement plan.	Determine if criterion level of objective was attained. Posttesting students to determine "level of mastery" is an example.
Initial status prior to health promotion activity (pretest).	Determine if results after the activity are better than initial level before the activity. Pretesting and posttesting students to show gains is an example.
Results of an alternative health promotion activity (normative approach).	Determine if results after the new activity are better than the results after the alternative activity. The comparison of two programs is an example.
Results of no health promotion activity (normative approach).	Determine if results after the activity are better than the results obtained when no activity is done. Comparison of students in a "control" group is an example.
Continuing incremental gains (time series).	Determine if results persist after the activity, and benefits continue to be realized. Follow-up evaluations are an example.

The following are the tasks for your team to determine the evaluation design:

Task	Person Responsible	Deadline for Completion
a. Review evaluation questions and objectives of school health plan to determine standards of comparison.		
b. Review existing record-keeping system for relevant data.		
c. Determine natural cycles of implementation of the plan.		
d. Design and schedule periodic surveys of data not addressed in task "b."		
e. Implement monitoring steps from Chapter III to determine fidelity.		
f. Collect data and make normative or internal comparisons.		
g. Determine degree of effectiveness.		

L. Do you know what kinds of outcomes could be measured?

The nature of the expected benefits also affects our evaluation design. Various legal, ethical and practical issues constrain our approach. For example, ethically, we are obliged to not expose students to undue risk by denying them services. We would not deny one sample of students immunizations to demonstrate the merits of immunizations in another sample. Furthermore, for practical as well as empirical reasons, the school does not have to demonstrate the long-term effects of some health promotion activities. Here's why. Health, human service and educational research have already provided convincing evidence of the benefits of certain activities. If we can generalize the findings of this research to our own school situations, we are not obliged to reassess or reaffirm the benefits. We do, however, need to demonstrate that the activities were comparable in nature, particularly where the health and welfare of the students are concerned.

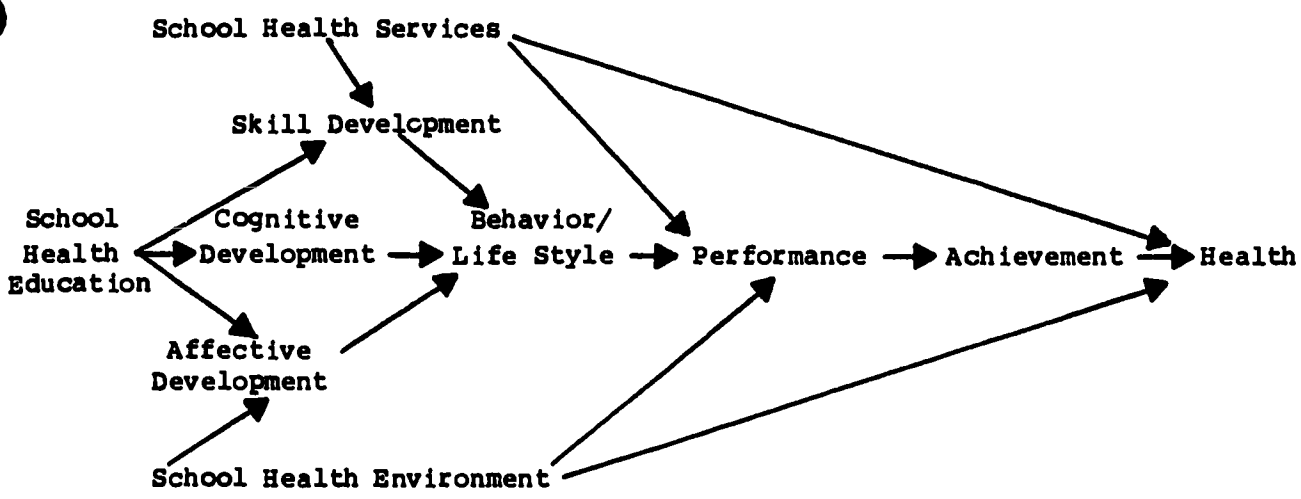
Schools need not re-document effects when convincing evidence already exists.

For example, the value of immunizations has been well documented in medical research. While we need to verify that students have received immunizations, the school is not responsible for demonstrating the long-term benefits. This is also true for most facility modifications, like smoke alarms, asbestos containment and lighting. It's true of established medical procedures like CPR. Some outcomes are simply beyond the purview of the school to evaluate. It's not the school's responsibility to conduct scientific experiments. Nor, in many

cases, would it be safe, ethical, or even financially feasible to do so. We are well within the bounds of sound evaluation practice if we accept the claimed benefits of a service or activity as established fact, provided we have documented evidence from an accredited source.

Kolbe, et al. (1983) propose a rationale for school health promotion that combines the educational expectations for academic performance and the public health expectation for long-term health. We've adapted their ideas here to illustrate how school health can directly influence student achievement by affecting students' health skills, knowledge and attitudes.

See diagram below.



A School Health Promotion Model

Kolbe, et al. note that "our purpose is simply to specify the essential elements linking school health promotion interventions with health outcomes in a causal chain that recognizes and gives primacy to the educational outcomes that are the main, if not sole, concern of the schools."

Looking at this model of school health, we can see a number of outcomes which we could realistically evaluate. Let's start with direct results and move toward more tenuous expectations:

Different levels of outcomes can be studied.

1. Delivery of School Health
    a. School health services
    b. School health education
    c. School health environment
2. Direct Student Effects
    a. Knowledge development
    b. Attitude development
    c. Skill development
    d. Current health status
3. Intermediate Student Effects
    a. Behavior/lifestyle
    b. School performance
    c. Academic achievement
4. Long-Term Effects
    a. Student health status
    b. Family health status
    c. Community health status

Whether or not a school decides to evaluate long-term effects (Level 4) depends upon decision makers' philosophies. It is one thing to ask whether a school could evaluate student, family and community health; there is also the issue of whether a school should evaluate these long-term effects. From an evaluator's point of view, the results would be difficult to substantiate. The ten more direct outcomes and their related designs and measurement approaches are summarized in Table 12.

As you can see by Table 12, your school improvement team can keep busy evaluating the direct effects of its efforts without worrying about long-term community health outcomes. There are at least 20 strategies that can be used to assess the effectiveness of your school health promotion efforts without leaving the school grounds; however, we are not suggesting that you do them all. We're presenting them as useful alternatives. Your final choice will depend upon the particular nature of your school health improvement plan.

Table 12

Measurement Procedures for School Health Promotion Outcomes

School Health Promotion Outcome	Intended Claim	Method of Measurement
School Health Services	Acceptable Performance	Documentation of service delivery as planned to intended target audience.
	Improved Performance	Longitudinal documentation of service delivery to demonstrate improved quality, scope or efficiency.
School Health Education	Acceptable Performance	Documentation of health instruction as planned to intended target audience.
	Improved Performance	Longitudinal documentation of health instruction to demonstrate improved quality, scope or efficiency.
School Health Environment	Acceptable Performance	Documentation of facility or climate modifications as planned.
	Improved Performance	Longitudinal documentation of facility or climate modifications to demonstrate improved quality or efficiency.
Student Health Knowledge	Acceptable Performance	Norm-referenced test to demonstrate student knowledge is comparable to norming sample. Criterion-referenced test to demonstrate student mastery of health knowledge content.
	Improved Performance	Pre-post testing of students in one or more programs using norm-referenced or criterion-referenced tests to demonstrate relative gains of students.
Student Health Attitudes	Acceptable Performance	Attitude survey of students to demonstrate acceptable student attitude.
	Improved Performance	Pre-post attitude survey of students in one or more programs to demonstrate relative gains of students.
Student Health Skills	Acceptable Performance	Observation or self report of students to demonstrate acceptable student skill.
	Improved Performance	Pre-post observation or self report of students in one or more programs to demonstrate relative gains of students.
Current Health Status	Acceptable Performance	Student adherence to health maintenance plan.
	Improved Performance	Health problems/needs documented on health service record as being remediated.
Student Health Behavior/Lifestyle	Acceptable Performance	Student self report or documentation of critical incidents to demonstrate desired student health behaviors.
	Improved Performance	Pre-post student self report or longitudinal documentation of critical incidents to demonstrate improved student health behaviors.
Student School Performance	Acceptable Performance	Collection of attendance, time-on-task or other performance data to demonstrate student performance meets school's expectations.
	Improved Performance	Longitudinal collection of attendance, time-on-task or other performance data to demonstrate improvements in performance over time.
Student Academic Achievement	Acceptable Performance	Norm-referenced test to demonstrate student achievement is comparable to national norms. Criterion-referenced test to demonstrate student mastery of prescribed academic content.
	Improved Performance	Pre-post testing or longitudinal assessment using norm-referenced or criterion-referenced tests to demonstrate student gains over time.

At this point the team should list and classify the outcomes described in the objectives of the school health plan along with the evaluation design identified in Section A of this chapter. Then, the team can refer to the specific sections in the remainder of the chapter which relate to those outcomes of the school health plan.

List your objectives here:

Objective	Design From Page 181	Standard of Comparison From Page 185	Method of Measurement From Page 190

C. Do you evaluate the quality of service delivery?

Without looking at student outcomes, what evidence can be gathered concerning the success of your school health activities? In Chapter IV, procedures were described for monitoring the implementation of the plan. The authentic reproduction of the planned activities within the school would be one indicator of success. Beyond this issue of fidelity, the quality of service delivery becomes the key measure of success.

Success depends largely upon quality of service delivery.

Can we document the delivery of services to the intended target audience? Let's say you have a preschool screening program for the early identification of health and learning problems. To evaluate the quality of this program, you need to determine if all preschoolers went through the program and if the screening procedure adequately addressed the health and learning problems described in the plan.

However, maybe your evaluation of the health services shows that the objectives aren't being attained; not all students go through the screening and not all important health and learning issues are addressed. Then it is important to determine why. Remember, the purpose of evaluation is school improvement. One approach is to keep a longitudinal accounting of how well a program operates each year. Are we doing a better job this year than last year? Are we involving more children and their families? Is the quality of service comparable from school to school and year to year? What was the relative cost per child to conduct the screening this year versus last? By comparing past

and present performance, we begin to accumulate the information and experience we need to do a better job in the future. The evaluation process presumes that we can learn from our mistakes.

But wouldn't we always want to look at student outcomes to evaluate the success of a school health activity? No, not always. For example, the removal or encapsulation of friable asbestos material has consequences for the health of students and staff. But the effectiveness of the school health plan is measured by the successful management of the material itself. Did the plan result in the attainment of the intended objective?

Student outcomes and objective attainment are main measures of effectiveness.

Prevention-oriented school health activities, particularly those which deal with the physical environment, are generally measured on the basis of objective attainment, rather than student outcomes. For example, the effectiveness of an immunization program may be gauged by the proportion of students with current vaccination records. Success would be measured by reviewing the health records of students, rather than tracking the incidence of diphtheria, polio or other communicable diseases.

Objective attainment is assessed using the same methods as those described for evaluating fidelity in Chapter IV. Objective attainment can be assessed by observation, interview, survey or records review. The specifications of the objective will largely dictate how it will be assessed:

Focus of Objectives	Example	Method of Assessment
Physical state of facility	Placement of fire extinguisher	Observation
Routine behavior of staff	Staff management of students on the playground	Observation
Quality of written materials	Development of new curriculum	Records review
Attitude of staff	Satisfaction with smoking policy	Survey
Awareness and understanding of staff	Compliance with child abuse reporting procedures	Interview

Please review the procedures discussed in Chapter IV for further information about these methods. To complete this step, the following tasks are necessary:

Task	Person Responsible	Deadline for Completion
a. Review objectives of school health plan to identify those which do not focus on student outcomes.		
b. Determine appropriate method of data collection.		
c. Determine evaluation design of the objective.		
d. Collect information.		
e. Determine degree of objective attainment.		
f. Make refinements to school health plan, as needed.		

D. Do you evaluate your students' health knowledge?

Health knowledge, as a cognitive process, seems to be the most comfortable outcome for educators. Students' knowledge of good health practices has traditionally been assessed using pencil and paper tests.

In our discussion of designs, we referred to norm referenced and criterion referenced testing. The intrepretation of the results of norm referenced tests is different from that of criterion referenced tests. Norm referenced tests are used to compare the achievement of one student to those of other students in the norming sample. Test scores are expressed as percentile ranks or normal curve equivalents or grade level equivalents. Criterion referenced tests are used to compare the achievement of the student against a standard relevant to the body of knowledge being taught. Test scores are expressed as percent correct, standard scores or raw scores.

Test selection will depend on what school staff want to learn about student knowledge.

Depending upon your purpose for testing, one method may be preferable over another. For example, if the purpose of your evaluation is to assess student mastery, then a criterion referenced test would be preferred since the results are expressed in terms of mastery level. If, on the other hand, you want to determine how well students in your school perform in comparison to other students, a norm referenced test will serve your purpose better. In selecting or developing a test, the real issue is twofold: (1) How well do the test items match the curriculum content, and (2) What kind of comparison will be made with the test results?

There are several designs for assessing health knowledge. One is to posttest students, requiring that they demonstrate mastery of the information. A second approach is to pretest and posttest, allowing students to demonstrate gains or improved mastery of the information. A third approach is to use a norm referenced test to demonstrate the relative gains of your students compared to a norm group. This norm group could either be comparable (e.g., other students at the same grade level), or it could be a group of health professionals (whose scores on the test would represent "ideal performance.") A fourth approach is to compare your students' scores to those of past students. In each approach the benchmark you use for gauging success differs. When you plan your evaluation, carefully consider what benchmark you are using, as shown below in Table 13.

Table 13

Evaluation Designs and Their Benchmarks

Approach	Example of a Benchmark
1. Posttest for mastery	Eighty percent of the content is mastered by 80 percent of the students (a criterion level set by the school staff).
2. Pre-post tests for gains	Posttest average should exceed pretest.
3. Relative performance to a comparable norming group	Posttest average should equal or exceed 50th percentile.
4. Relative performance to an ideal norming group	Posttest average should approach 50th percentile.
5. Relative performance to previous or alternate program	Posttest average should equal or exceed average of other group.

To help get you started with knowledge assessment, we have listed sources of tests and test items, as well as some practical books on how to develop tests locally.

Test Construction

Educational Testing Service. (1973). Making the classroom test: A guide for teachers. Princeton, NJ: Educational Testing Service. (ED 081 784). Available from: ERIC Document Reproduction Service, 3900 Wheeler Ave., Alexandria, VA 22314.

This pamphlet includes numerous practical suggestions that may help teachers make better tests. It presents general principles for constructing tests to meet specific classroom needs, reviews special problems in writing and scoring tests, and recommends the kind of test analyses teachers should conduct. It provides both essential guidelines and realistic illustrations to serve as guides in improving tests for classroom teachers.

Gabbert, L.C. (1977). Basic guidelines for improving classroom tests. Bensenville, IL: Scholastic Testing Service, Inc. Available from: Scholastic Testing Service, Inc., 480 Meyer Road, Bensenville, IL 60106. Price: $1.50.

This booklet provides classroom teachers with a concise resource to aid in test development. It deals with practical issues such as test planning, types of tests, weaknesses of each type of test, ways to improve a test, and scoring and grading. The booklet also offers a few basic guidelines for developing quality test items and is a good general resource for classroom teachers.

Hills, J.R. (1981). Measurement and evaluation in the classroom (2nd ed.). Columbus, OH: Charles E. Merrill Publishing Company. Available from: Charles E. Merrill Publishing Co., 1300 Alum Creek Drive, Columbus, OH 43216. Price: $23.95.

This is a thorough introductory text on measurement issues for teachers. It covers how to (1) create quality teacher-made tests, (2) select and use standardized tests, (3) give grades to students, and (4) evaluate students' attitudes and opinions. The text also emphasizes using test results and potential weaknesses of different types of tests. It is very readable and informative and should help in conducting in-class assessments.

Shaw, D. (1977, March/April). Evaluation - The classroom dilemma. Health Education, 8 (2), 5-6.

The author presents a succinct four-step process for developing classroom tests. Included are brief examples of different levels of evaluation questions, ranging from memory to synthesis and evaluation, that should be helpful in writing test items.

Smith, J.K. (1979). The role of measurement in the process of instruction. Princeton, NJ: ERIC Clearinghouse on Tests, Measurement and Evaluation. (ED 189 164). Available from ERIC Document Reproduction Service, 3900 Wheeler Ave., Alexandria, VA 22314.

In a concise and readable discussion, this author describes how assessment is vital to quality instruction and what methods of gathering information about students, both informally and via test results may be used. The booklet describes essential terms in testing, including types of tests available, the meaning of various test scores, and the interpretation of test validity and reliability. The author also addresses an efficient method for evaluating test quality.

Knowledge Assessment

Connell, D.B., Olsen, L.K., Turner, R.R., & Simon, R. (1985, February). Final report of the school health education evaluation; Volume IV: Student inventory manual. Washington, D.C.: U.S. Public Health Service, Centers for Disease Control. To be made available from National Technical Information Service (NTIS), U.S. Department of Commerce, Springfield, VA 22161. Price not yet established.

The manual contains a description of more than 600 test items used to evaluate the knowledge, attitude and reported health practices of a national sample of 30,000 students in grades 4-7 participating in school health education programs. The manual provides an excellent source of items for developing local tests.

IOX Assessment Associates. (1983). An evaluation handbook for health education programs in alcohol and substance abuse. Washington, DC: U.S. Public Health Service, Centers for Disease Control. (Pb 84-167139A18). Available from: National Technical Information Service (NTIS), U.S. Department of Commerce, Springfield, VA 22161. Price: $31.00.

The handbook is a useful resource for identifying tests and measures for alcohol and substance abuse. It contains information on basic concepts regarding the evaluation of

health education programs; a set of newly developed assessment tools for knowledge, attitudes, skills and behaviors; test specifications for each instrument; and a collection of existing measures which have been used for health education program evaluation. The newly developed measures presented in the handbook have not been empirically validated.

IOX Assessment Associates. (1983). An evaluation handbook for health education programs in diabetes. Washington, DC: U.S. Public Health Service, Centers for Disease Control. (Pb 84-171727A22). Available from: National Technical Information Service (NTIS), U.S. Department of Commerce, Springfield, VA 22161. Price: $37.00.

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IOX Assessment Associates. (1983). An evaluation handbook for health education programs in immunization. Washington, DC: U.S. Public Health Service, Centers for Disease Control. (Pb 84-170554A14). Available from: National Technical Information Service (NTIS), U.S. Department of Commerce, Springfield, VA 22161. Price: $25.00

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IOX Assessment Associates. (1983). An evaluation handbook for health education programs in nutrition. Washington, DC: U.S. Public Health Service, Centers for Disease Control. (Pb 84-170034A20). Available from: National Technical Information Service (NTIS), U.S. Department of Commerce, Springfield, VA 22161. Price: $34.00

The handbook is a useful resource for identifying tests and measures for nutrition. It contains information on basic concepts regarding the evaluation of health education programs; a set of newly developed assessment tools for

knowledge, attitudes, skills and behaviors; test specifications for each instrument; and a collection of existing measures which have been used for health education program evaluation. The newly developed measures presented in the handbook have not been empirically validated.

IOX Assessment Associates. (1983). An evaluation handbook for health education programs in smoking. Washington, DC: U.S. Public Health Service, Centers for Disease Control. (Pb 84-169762A15). Available from: National Technical Information Service (NTIS), U.S. Department of Commerce, Springfield, VA 22161. Price: $26.50

The handbook is a useful resource for identifying tests and measures for smoking. It contains information on basic concepts regarding the evaluation of health education programs; a set of newly developed assessment tools for knowledge, attitudes, skills and behaviors; test specifications for each instrument; and a collection of existing measures which have been used for health education program evaluation. The newly developed measures presented in the handbook have not been empirically validated.

IOX Assessment Associates. (1983). An evaluation handbook for health education programs in physical fitness. Washington, DC: U.S. Public Health Service, Centers for Disease Control. (Pb 84-171693A17). Available from: National Technical Information Service (NTIS), U.S. Department of Commerce, Springfield, VA 22161. Price: $29.50

The handbook is a useful resource for identifying tests and measures for exercise. It contains information on basic concepts regarding the evaluation of health education programs; a set of newly developed assessment tools for knowledge, attitudes, skills and behaviors; test specifications for each instrument; and a collection of existing measures which have been used for health education program evaluation. The newly developed measures presented in the handbook have not been empirically validated.

King, A., Robertson, A., Warren, W., Fuller, K., & Stroud, T. (1984). Summary report, Canada health knowledge survey: 9, 12 and 15 year olds. Kingston, Ontario, Canada: Queens University, Social Program Evaluation Group. Available from: Dr. G. Mutter, Chief, Education and Training Unit, Health Promotion Directorate, Jeanne Mance Building, Ottawa, Ontario K1A1B4. No charge.

A discussion of the national assessment of students' health knowledge in grades 4, 7 and 10 conducted during the 1982-83 year in Canada is provided in this publication. Test items are included in the document, making this a useful resource for developing local tests.

Michigan Educational Assessment Program. (1984). Health education: Student assessment booklet (Grades 4, 7, 10). Lansing, MI: Michigan State Board of Educaton. Available from: Michigan Educational Assessment Program, Michigan Department of Education, P.O. Box 30008, Lansing, MI 48909. No charge.

These booklets contain the test items on health education used in Michigan's statewide assessment. The assessment, conducted at grades 4, 7 and 10, provides a mechanism for evaluating health skills and for modifying programs to address areas of weakness. The booklets also provide a resource of sample items for knowledge assessment in health, readily adaptable to other districts.

National Assessment of Education Progress. (1978, September). Checkup: A national assessment of health awareness. Washington, DC: National Center for Education Statistics. (ED 160 604). Available from ERIC Document Reproduction Service, 3900 Wheeler Ave., Alexandria, VA 22314.

The results of a national assessment of the health knowledge and awareness of 17 year old students are presented in the areas of (1) accident prevention, (2) emergency care skills, (3) nutrition, (4) cigarettes, alcohol and drugs, (5) diseases and disorders, (6) human sexuality and (7) health care services. The test items and the performance of the sample on these items are provided, enabling their use as "norms" for local comparison.

Here are the tasks involved in assessing students' health knowledge:

Task	Person Responsible	Deadline for Completion
a. Review objectives from school health plan to identify expected student knowledge outcomes.		
b. Define specific scope of expected student knowledge, referring to curriculum scope and sequence.		
c. Select and/or develop test items corresponding to scope.		
d. Do a trial run of test to check for problems.		
e. Determine evaluation design and benchmark desired for assessment.		
f. Conduct assessment according to design.		
g. Determine degree of objective attainment.		
h. Make refinements to school health plan as needed.		

E. Do you evaluate your students health attitudes?

Attitudes are the second set of student outcomes we need to consider. Student attitudes are rather elusive, however. One reason is the lack of definition. We talk about attitudes, values, opinions, interests, beliefs, self-concepts and emotions. In general terms, attitudes reflect a predisposition to behave a certain way in reaction to certain things. This means that attitudes are learned and that they are related to behavior. It also means that they deal more with feelings than with facts.

If we are going to ensure the effectiveness of school health promotion activities on students' attitudes, we again are faced with defining what to measure, as well as how to measure. Defining what to measure is simpler if we think of attitudes as what students value. In this case, we can accept the definition that value is worth, merit or esteem. It makes sense when we talk about self-esteem (value of self), attitude toward school (value for school) and attitudes about health behaviors (value for lifestyles). This definition suggests that values or attitudes vary from negative to positive. It also implies that we are dealing with subjective opinion, which is difficult, at best, to substantiate.

"Defining what to measure is simpler if we think of attitudes as what students value."

With this definition in mind, identifying what attitudes we should measure depends upon what attitudes we believe the school health improvement activities will (and should) influence. As a rule of thumb, the more general the expected change, the more

general the measure. Here is an example. If our school health promotion efforts are attempting to enhance the school climate for students, then we want to use global measures of students' attitudes toward school. On the other hand, if the school health promotion activities focus directly on child abuse prevention, then we want to measure students' attitudes toward situations or conditions where they would be at risk. This may seem obvious, but in practice, schools frequently emphasize one activity and measure another. For example, within the mental health strand of a health education program, a common concept is self-awareness, which emphasizes the recognition of personal strengths and weaknesses. However, instead of measuring self-awareness, "self-concept" is assessed. The distincton is more than semantic. If students are aware of their personal strengths and weaknesses, their performance on a self-concept measure may actually decline pre-to-post, because they now do recognize and accept their shortcomings, instead of describing themselves in an overly positive light.

Appropriateness and confidentiality are especially important when using student attitude measures.

There are several excellent sources of information on selecting or developing attitude measures, which are generally student questionnaires. These are listed below. However, two suggestions are in order. First, in selecting or developing an attitude measure, think of the attitude you want to measure and the behavioral traits likely to be manifested by someone holding that attitude. Most attitude scales assess the degree to which students agree that various traits are characteristic of their own feelings and behavior.

Second, because personal values and attitudes are private feelings, the confidentiality of this information should be respected in collecting and reporting the results. Students may be more willing to express their true feelings if the questionnaire is completed anonymously and voluntarily. Community reaction to the school's role in dealing with student feelings should also be considered.

Here are resource materials on the topic of attitude assessment:

Affective Assessment

Anderson, W. (1981). Assessing affective characteristics in the schools. Newton, MA: Allyn & Bacon, Inc. Available from: Allyn & Bacon, Inc., College Div., Link Drive, Rockleigh, NJ 07647. Price: $25.95.

This publication provides a comprehensive look at affective assessment. It describes techniques for developing self-report instruments, analyzing the quality of an instrument, interpreting scores, and determining the diagnostic value of an affective assessment.

Hills, J.R. (1981). Measurement and evaluation in the classroom (2nd ed.). Columbus, OH: Charles E. Merrill Publishing Co. Available from: Charles E. Merrill Publishing Co., 1300 Alum Creek Drive, Columbus, OH 43216. Price: $23.95.

This is a thorough introductory text on measurement issues for teachers. It covers how to (1) create quality teacher-made tests, (2) select and use standardized tests, (3) give grades to students, and (4) evaluate students' attitudes and opinions. The text also emphasizes using test results and potential weaknesses of different types of tests. It is very readable and informative and should help in conducting in-class assessments.

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IOX Assessment Associates. (1983). An evaluation handbook for health education programs in nutrition. Washington, DC: U.S. Public Health Service, Centers for Disease Control. (Pb 84-170034A20). Available from: National Technical Information Service (NTIS), U.S. Department of Commerce, Springfield, VA 22161. Price: $34.00.

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IOX Assessment Associates. (1983). An evaluation handbook for health education programs in smoking. Washington, DC: U.S. Public Health Service, Centers for Disease Control. (Pb 84-169762A15). Available from: National Technical Information Service (NTIS), U.S. Department of Commerce, Springfield, VA 22161. Price: $26.50.

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IOX Assessment Associates. (1983). An evaluation handbook for health education programs in physical fitness. Washington, DC: U.S. Public Health Service, Centers for Disease Control. (Pb 84-171693A17). Available from: National Technical Information Service (NTIS), U.S. Department of Commerce, Springfield, VA 22161. Price: $29.50.

The handbook is a useful resource for identifying tests and measures for exercise. It contains information on basic concepts regarding the evaluation of health education programs; a set of newly developed assessment tools for knowledge, attitudes, skills and behaviors; test specifications for each instrument; and a collection of existing measures which have been used for health education program evaluation. The newly developed measures presented in the handbook have not been empirically validated.

Morris, L.L., & Fitz-Gibbon, C.T. (1978). How to measure attitudes. Beverly Hills, CA: Sage Publications, Inc. Available from: Sage Publications, Inc., 275 Beverly Drive, Beverly Hills, CA 90212. Price: $8.95.

This step-by-step guide for assessing students' attitudes is the fifth volume of the Program Evaluaion Kit, $59.95.

Sutherland, M.S. (1980, Fall/Winter). Affective evaluation techniques in school health education. Eta Sigma Gamman, 12 (3), 22-24.

In this brief article, the author presents an overview of affective measurement techniques, such as the Thurston Attitudes Scales, the Likert Scale, rating scales and semantic differential. This introductory review of measures includes numerous health education examples.

Here are the tasks involved in assessing students' health attitudes:

Task	Person Responsible	Deadline for Completion
a. Review objectives from school health plan to identify expected student health attitude outcomes.		
b. Define specific nature and scope of expected student attitude.		
c. Select and/or develop items for questionnaire corresponding to definition.		
d. Do a trial run of questionnaires to check for problems.		
e. Determine evaluation design and benchmark desired for assessment.		
f. Conduct assessment according to design.		
g. Determine degree of objective attainment.		
h. Make refinements to school health plan as needed.		

F. Do you evaluate your students' health practices?

The third kind of direct effect is practice. We have made a rather arbitrary distinction between practice (skills) in particular and behavior in general. While practices are health behaviors, they are intentionally taught to students and their use is encouraged in school. This means that health practices are more readily identifiable than general health-related behaviors. Here is how you can tell the difference. Two things will be true of a practice. First, the health promotion program will identify it as a specific skill to be taught. Second, the health promotion program will provide an opportunity for the practice to be demonstrated. Dental hygiene, including tooth brushing and fluoride rinsing, is one good example. A wide variety of safety skills essential in shop, driver education and the science lab are also examples. Interpersonal skills within the classroom could also be considered practices. General health behaviors, on the other hand, are integrated into a student's lifestyle and practiced both in and out of school.

Making and recording observations provide data on health practices.

Why is it so important to differentiate between a specific practice and a general behavior? Because of the way each is evaluated. The best way to assess any kind of behavior is through direct observation. Since practices are defined as specific skills that students are provided opportunities to demonstrate, practices (or skills) can be observed with relative ease. Checklists, defining various components or stages within a skill, are useful in assessing students' proficiency.

By dividing the skills into discrete components or steps, you can judge the level of a student's proficiency with a fair degree of accuracy and reliability. Most evaluation and measurement resources we have mentioned provide guidance for developing and using observation checklists. A review of those references may be helpful at this point. Here is an additional resource.

Guerin, G.R., & Maier, A.S. (1982). Informal assessment in education. Palo Alto, CA: Mayfield Publishing Co. Available from: Mayfield Publishing Co., 285 Hamilton Avenue, Palo Alto, CA 94301. Price: $14.95.

In this thorough publication on assessing students informally through observation, the authors include a useful chapter on observation methods. It describes various options, their strengths and limitations and techniques for using indirect or unobtrusive observations.

Here are the tasks involved in assessing students' health practices:

Task	Person Responsible	Deadline for Completion
a. Review objectives from school health plan to identify expected student health practice outcomes.		
b. Define specific skills/steps in practice and the manner in which it will be demonstrated.		
c. Develop checklist detailing practice.		
d. Do a trial run using observation checklist to identify problems, if any.		
e. Determine evaluation design and benchmark desired for assessment.		

Task	Person Responsible	Deadline for Completion
f. Conduct assessment according to design.		
g. Determine degree of objective attainment.		
h. Make refinements to school health plan as needed.		

G. Do you evaluate the health status of your students?

In some instances, school health services directly affect the current health status of the students. For example, the school nurse may monitor and provide support to students returning to school after an illness (aftercare) and students who are on a health maintenance plan (self care). In these cases, changes in the health status of the students may reflect the effectiveness of the nursing intervention.

However, the most common reason for the assessment of the health status of students is not for program evaluation, but rather for determining student needs. For example, students' growth and development, health history, physical assessment and immunization status, along with vision, dental, scoliosis, hearing and other screening information, is maintained to detect and prevent health problems, as well as to promote and maintain the good health of students. To the extent that the school is directly responsible for the current health status of the students, as defined by law, policy and the school health plan, the use of the students' current health status as a measure of effectiveness will be appropriate.

Health status data are used to address student needs and to evaluate program effectiveness.

Information on the health status of students is usually not a measure of effectiveness, but rather an indicator of student needs used to plan desirable school health activities (See Chapter II). As a mechanism for planning, student health records can be used to identify common, recurring incidents which suggest revisions to the school health plan. For example, what are the

most common injuries treated by the nurse, what was their cause and how frequently do they occur? Please review Chapter II, Section C for more information about the use of student need information for planning school health goals.

To evaluate the effectiveness of the school health plan based on the health status of students requires a method for measuring and recording health status. What is measured and recorded will be dictated largely by state and local policy covering the school's role in the health care of students. The health records of students will provide the source of information for your evaluation, since their contents should be based on that policy.

Here are the steps to consider in using student health status as a measure of the effectiveness of your school health plan:

Task	Person Responsible	Deadline for Completion
a. Review the objectives of the school health plan to identify expected changes in the current health status of students.		
b. Review state and local policies to determine appropriate role of school for students' health status.		
c. Review school health records of students to identify health trait to be measured.		
d. Determine evaluation design and benchmark desired for assessment.		

Task	Person Responsible	Deadline for Completion
e. Review records and collect data according to design.		
f. Determine degree of objective attainment.		
g. Refine school health plan as needed.		

H. Have you looked at other general indicators of students' health behavior, lifestyle and school performance?

The intermediate effects of your school health efforts may be manifested as behavior, performance or achievement. These are three very important outcomes for school health. First, we are hoping for students to adopt a lifestyle that promotes health. And by "lifestyle," we mean behaviors the student practices both in and out of school. Second, we are looking for positive effects upon school performance. We hope to see a reduction in absenteeism and tardiness, accompanied by increased time on task, as a result of students' improved health behaviors. Finally, we hope to see an increase in students' academic achievement, as measured by standardized achievement tests and classroom performance measures. This third outcome, of course, is influenced by health.

In the previous section we made an important distinction between specific practices (skills) and more general health behaviors. General health behavior is more difficult to observe. When and how will such behavior be demonstrated? How often will it be demonstrated? Will it be demonstrated outside school or in conjunction with a variety of other unanticipated health behaviors? For example, observing students in the cafeteria may tell us a lot about their eating habits, but next to nothing about which students smoke or exercise regularly.

Given that direct observation sometimes may prove difficult, impractical or inefficient, we recommend two additional strategies for collecting information. One is student self-report; the second is the use of unobtrusive measures. The value of student self-report is based on the assumption that there is a fairly predictable relationship between what people say they do and what they actually do. This assumption is questionable at best. Students' reported health behaviors are highly colored by their perceptions of social desirability--that is, they tend to say what they think you want to hear. The self-report method involves using a questionnaire, similar to an attitude survey, that questions students about the nature or frequency of their health behaviors. For example, "I wear a seat belt when I ride in a car: Always, Usually, Sometimes, Rarely or Never." Despite its drawbacks, the self-report method is useful for assessing behavior that occurs away from school, as well as for corroborating other measures you've used.

Self reports and unobtrusive measures provide alternatives for assessing health outcomes.

The use of unobtrusive measures is based on the assumption that many behaviors leave behind physical evidence either by erosion (wear) or accretion (litter). Smoking on the school grounds produces cigarette butts. Uneaten meals in the cafeteria are left as food waste. Use of dental floss uses up the roll of floss. The use of such evidence, however, is again limited to the school setting where it can be readily gathered or observed. Unobtrusive evaluation is particularly useful for nutrition evaluations (plate waste studies) and other controlled situations

involving the consumption of materials (if you don't mind digging through garbage cans). The most important task in planning an evaluation of behavioral outcomes is to identify the specific behaviors you predict will change. Would it be reasonable to expect your school's activities or current curriculum to change these behaviors? How soon? In other words, test your assumptions before you design your outcome measures.

The evaluation of improved school performance, as an indicator of the effectiveness of school health, focuses on behaviors that positively influence academic achievement, such as increasing on task behavior. Here is the line of reasoning. If students feel better because they are better fed, better rested, and better exercised, then their attendance will improve, tardiness will decline, and engaged learning time will increase. Essentially, improved health status will help children become better students. If the assumption proves true, it certainly is a goal worth striving for.

Standard school records and changes in student performance produce evaluation data.

For the most part, existing school records on absenteeism and tardiness are readily available. Disciplinary suspensions and other indicators of school and classroom disruptions can also be documented. Most important, engaged learning time (time on task) can be estimated through a sample of classroom observations. Such observations could occur in conjunction with your assessment of instructional quality discussed in Chapter IV.

Finally, we see improved academic achievement as a goal of school health promotion. Again, existing measures such as standardized achievement tests and classroom assessment procedures can be used to gauge changes in achievement over time. But keep your expectations reasonable. It would take a tremendous investment of energy to make dramatic changes in achievement. Improvements do not happen overnight, they do not happen by magic, and they do not happen for free.

For example, a national study of exemplary school health education programs conducted by Abt Associates found a very clear relationship between the hours of classroom health instruction and the gains in student knowledge, reported practices and attitudes: The more hours, the greater the gain until a plateau is eventually achieved at about 50 hours of instruction (per year). They also found that more hours of instruction were needed to change attitudes than were needed to change knowledge or reported health practices. Furthermore, they pointed out that "teacher training and program support materials were a postive influence upon the implementation of a school health program and that full implementation was important to success for each of the participating programs" (Connell et al., 1985). Remember, you get what you pay for. That is true of both the health promotion activities themselves and the evaluation of them.

The tasks involved in assessing the general indicators described in this section are as follows:

Task	Person Responsible	Deadline for Completion
a. Review objectives of school health plan to identify expectations concerning students' health behavior, performance or achievement.		
b. Specifically define the nature of the behavior, performance or achievement.		
c. Determine method of collecting information--school records, observation or self-report.		
d. Review design and benchmark to be used for the evaluation.		
e. Collect information in accordance with the design.		
f. Determine degree of objective attainment.		
g. Refine school health plan as needed.		

I. **Have you looked at costs when evaluating the effectiveness of the school health plan?**

When the effectiveness of school health is evaluated, one factor often ignored is cost. The efficiency of a school health activity can be measured by determining the amount of money it cost to get the results we desired. Identifying the costs of school health activities is usually easier than determining the outcomes. There are four basic analyses which could be done depending on the nature of the cost comparisons you wish to make. You can either look at services (activities) or outcomes (objectives). The cost of services only tells you what resources were required to deliver specific services, such as vision screening. The cost of outcomes tells you what resources were required to achieve specific benefits, such as knowledge gains on a test.

Four cost analysis strategies can be used.

You can also either make relative comparisons, by looking at the costs of programs that share common goals or you can make absolute comparisons, by determining whether the cost of a program is justifiable. Thus, the four cost analyses with which you may be concerned are:

	Delivery of Services	Achievement of Benefits
Relative Comparisons	Which program costs less to provide this activity?	Which program provides more benefit for the dollar?
Absolute Comparisons	Can the school afford to sponsor this activity?	Is the benefit of this activity worth it?

We have provided three down-to-earth references on cost analysis which should be helpful.

Cost Analysis

Smith, J.K. (1984). Cost outcome analysis: Measuring costs. (Research on Evaluation Program Guide No. 2). Portland, OR: Northwest Regional Educational Laboratory. Available from: Office of Marketing, Northwest Regional Educational Laboratory, 300 S.W. Sixth Ave., Portland, OR 97204. No charge.

This guide introduces cost-outcome analysis, describes what it is and explains four different types of analyses. It also discusses considerations in using cost analysis and explains how to collect resource data and how to figure costs. All discussions are organized around a series of basic questions which provide a useful format for introducing cost analysis procedures. Discussion is clear and materials give a good introduction to the subject.

Smith, J.K. (1984). Cost outcome analysis: Measuring outcomes. (Research on Evaluation Program Guide No. 4). Portland, OR: Northwest Regional Educational Laboratory. Available from: Office of Marketing, Northwest Regional Educational Laboratory, 300 S.W. Sixth Ave., Portland, OR 97204. No charge.

This booklet discusses how to select a cost-outcome analysis. It addresses practical questions for each type of cost analysis, such as when to use the procedure, its limitations, steps in collecting data and an example of each approach. The material should be useful introductory reading for those considering these procedures.

Wylie, W. (1983, August). Cost-benefit analysis of a school health education program: One method. Journal of School Health, 53, 371-373.

A brief, relatively nontechnical discussion of cost-benefit analysis is provided, using a high school health education course as an example. The article offers introductory information on this approach.

Here is a summary of the tasks involved in conducting a cost analysis:

Task	Person Responsible	Deadline for Completion
a. Determine the nature of the cost comparison to be made--absolute or relative and activities or outcomes.		
b. Determine the degree to which the activity was performed as intended (Chapter IV).		
c. Determine the effectiveness of the activity in achieving objectives. (Chapter V)		
d. Determine costs of performing the activity (Chapter III).		
e. Decide upon a common unit of analysis for comparing cost, such as per student.		
f. Compare costs and make recommendations concerning the efficiency of the school health plan.		

J. Do you know how to interpret the information collected?

Now that you have collected all this information about school health plans, activities and outcomes, what do you do with it? Rather than discussing inferential statistics and data analysis, let's look at the relationship between the evaluation findings and school health decisions. The point of conducting evaluations is to help you make better, more informed decisions about school health. There are several decisions which can be made about a school health plan. The primary question is "Did it work?" To this end we want to look at what evidence we have to indicate whether the school health plan achieved its objectives. As we discussed at the conclusion of Chapter IV, look for exceptions to the general trend of things. Is there a particular component of the plan where results were less positive than others? To identify these exceptions, make comparisons--from year to year, school to school, grade to grade, objective to objective.

"The primary question is, 'Did it work?'"

By comparing results of Chapter IV with results from Chapter V, you can make major decisions about the continuation of the school health plan, as depicted in Table 14.

Table 14

Decision Based on Evaluation of Fidelity and Effectiveness

	Degree of Program Effectiveness (Chapter V)		
Degree of Program Implementation (Chapter IV)	Positive Student Outcomes	Mixed Student Outcomes	Negative Student Outcomes
Completely as planned	Maintain existing program.	Make minor change to plan based upon student differences.	Make major adjustments to plan or abandon current plan.
Partially as planned	Make minor changes to ensure adherence to existing plan.	Make minor changes to plan based upon student differences and existing plan.	Specific action to be taken cannot be determined.
Not as planned	Determine actual procedures utilized and adopt them into new plan.	Make changes to ensure adherence to existing plan.	Attempt full implementation of existing plan--if not feasible, abandon plan.

A second evaluation question commonly asked is, "What should we do differently in the future?" The evaluation information will give you a couple of clues. For example, in Table 11 the upper right corner defines a situation where the plan was fully implemented with negative results. This situation calls for serious rethinking of the health plan and a review of Chapters II and III. Another clue about changes to the plan can be collected from student outcomes which are less than satisfactory. Look for areas in student knowledge, attitude, practice or health status which were problematic. Additional emphasis in the area may be needed. Again, review Chapters II and III to plan the school's strategy for meeting these needs.

Sharing evaluation evidence helps decision makers reach appropriate decisions.

In conducting the analyses, it is useful to think of the information as "evidence," rather than "data." Does the evidence suggest that the answer to your evaluation question is "Yes," "No" or "Can't tell?" Administrators and other decision makers aren't concerned with data. They are concerned with decisions.

Here are the tasks involved in the interpretation of the evaluation findings:

Task	Person Responsible	Deadline for Completion
a. Determine specific evaluation questions to be answered (Chapter I., Section D).		
b. Compare evidence over time, across schools and components to identify trends and exceptions.		
c. Organize evidence into alternative answers to questions.		

K. Do you know how to report evaluation results effectively?

The purpose of this manual is to introduce school personnel to procedures and approaches for evaluating school health activities. The focus is upon conducting internal evaluations for improving school health activities and helping administrators make informed decisions about those activities. Therefore, the intended audience of the evaluation reports are those individuals involved with decisions about your school--building and central office administrators, school board members, and the community at large.

Clear, down-to-earth reporting will help school people to use evaluation findings.

If evaluation is to be useful to these people, it must address their questions in a meaningful and timely manner. Therefore, the evaluation report needs to be organized in a way which is clear, informative and concise. The report should not resemble a dissertation or research journal article.

Here is the approach we suggest. First, pose the question to be addressed by the evaluation. For example, the question might be, "Does the consumer health education curriculum benefit the students?" Next, give the bottom line answer to the question which your evaluation provided. For example, the answer to the foregoing question might be, "Yes, students showed increased knowledge about personal responsibilities for consumer health and how to identify legitimate health resources. They also displayed positive attitudes toward the health-related agencies, laws and

services which protect their rights. The evaluation, however, did not show changes in students' reported use of over-the-counter health products." If the answer is unclear, don't be afraid to say so.

The reader is looking for headlines, which are supported by information provided in the body of the report. After the question and answer is presented, then background can be presented:

1. What is the school health activity under investigation? Describe the program, who it is for, when it was implemented and why it's important. This should be no more than a paragraph.

2. What is the focus of the evaluation? Describe how the evaluation question was reached, who conducted the evaluation over what period of time and the major elements covered by the evaluation. Specifically, what major sources of information were sought to answer the question. Again, this should be no more than a paragraph.

3. What evidence was revealed by each source of information? For each major element of the evaluation, describe in one paragraph the evaluation design, method of data collection and source of the information.

   For each major element of the evaluation, present and interpret the results. The presentation should be tabular, narrative and graphic if possible. That is, show tables, graphs and discuss both.

4. What conclusions can be drawn from the evaluation and what implications do they have for the school health plan? Conclude the report with a restatement of the evaluation question, answer it, and discuss the potential alternative steps that could be taken as a result of the findings. Evaluation should be an active and interactive process which facilitates decision making. Therefore, if the findings indicate some possible avenues of future action, they should be discussed. Readers want information, not "data."

Our previous example of a consumer health education evaluation is presented as a report on the following pages.

Date: March 12, 1986

To: Superintendent, Healthy School

From: School Health Team

Re: Report on the Consumer Health Education Curriculum Evaluation

Conclusion: Does the consumer health education curriculum benefit the students? Yes, students showed increased knowledge about taking personal responsibility for consumer health and identifying legitimate health resources. They also displayed positive attitudes toward the health-related agencies, laws and services which protect their rights. The evaluation, however, did not show changes in students' reported use of over-the-counter health products.

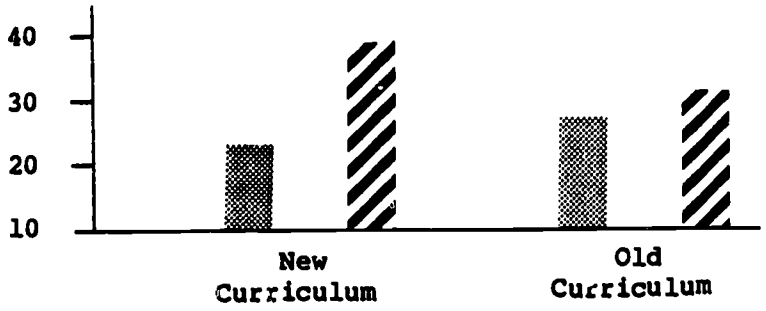
Background: The consumer health curriculum was adopted in one tenth grade class last fall as a pilot effort to determine if the materials were effective. The curriculum was tentatively adopted after a previous evaluation found that the state department of education's health education guide recommended inclusion of consumer health information, and a survey of parents, teachers and students revealed a high interest in this topic.

The school board adopted the consumer health goal as part of the high school curriculum and tentatively approved the use of the locally developed curriculum materials on the condition that the material benefitted students. The school health team initiated the evaluation first semester in one of the three high schools. The evaluation focused on three possible ways in which students might benefit--health knowledge, attitudes about consumer health protection and the practices of students as consumers of health products.

Health Knowledge: The Consumer Health subtest of the Adult APL Survey was given to the tenth grade students in each of the three high schools' health classes. The test was again given in the three classes at the end of the semester. The new material had been used by the teacher at the one school. The scores of the students on the 45-item multiple-choice tests were summarized as follows:

	n	Pretest Average	Posttest Average	Differences
New Class	29	21	37	+16
Old Class	57	23	25	+02
Difference		-02	+12	+14

Students in the health class using the new curriculum gained 16 points on the test, compared to a gain of 2 points by the other two classes. Overall, the students in the new class scored 12 points better than the other classes. Graphically, the results look like this:



= Pretest

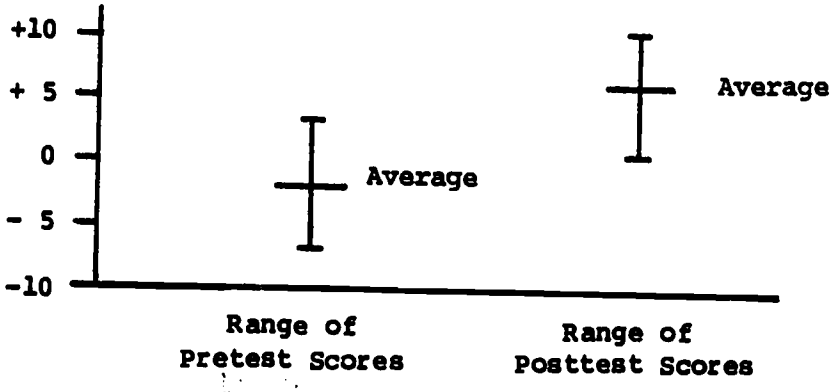
= Posttest

Based on the norms provided by the publisher for the tenth grade, the students using the new curriculum moved from the 5th to the 54th percentile--the percentage of tenth grade students in the nation scoring the same or below. The results suggest that students made substantial gains in health knowledge when compared to norms, their peers and pretests.

Health Attitude: Students in the class using the new curriculum also completed a 10-item attitude survey at the beginning and end of the semester. The locally developed survey asks students whether or not they agreed or disagreed with statements about the role of agencies and laws in protecting consumer health. For example, were the laws an imposition on personal rights, or were they a fair means of protecting the public from dangerous or useless products? At the beginning of the semester, students' scores were slightly negative toward consumer health, but by the conclusion of the semester the attitudes were moderately positive:

	n	Pretest Average	Posttest Average	Differences
New Class	29	-3	+6	+9

The survey scores can range from -10 to +10 points, where zero reflects a neutral attitude. Graphically, students' change in attitude looked like this:



While no norms were available of other groups tested, the change of nine points on the scale suggests that students' attitudes toward consumer health agencies and laws did improve as a result of the new curriculum.

Health Practice: As part of the attitude survey, students were asked to list the over-the-counter (nonprescription) drugs they had purchased in the past 30 days. This question was asked at both the beginning and end of the semester. Students at the beginning of the term reported that they had purchased an average of seven nonprescription items in the past month, including skin medications, cold remedies and analgesics (aspirin). At the end of the term, students reported the purchase of an average of eight nonprescription items in the past month. While this was a slight increase in reported use of such medications, it may have been due to increased student awareness of these products. Students may, in other words, have underreported their use at the outset of the term. The results are inconclusive, one way or the other.

Recommendations: Based upon the evaluation findings, the health team recommends the full adoption of the consumer health education curriculum in all tenth grade health classes. Additional evaluation activities are also encouraged to determine if teachers use the materials appropriately, if students' consumer health practices change and if consumer health is being taught at the expense of other health topics.

An excellent guide to help you prepare the evaluation report is the eighth volume of the Program Evaluation Kit ($59.95):

Morris, L.L. & Fitz-Gibbon. (1978) How to present an evaluation report. Beverly Hills, CA: Sage Publications, Inc. Available from: Sage Publications, Inc., 275 Beverly Drive, Beverly Hills, CA 90212. Price: $4.95.

The tasks for completing this section are as follows:

Task	Person Responsible	Deadline for Completion
a. Determine evaluation questions and audience for report.		
b. Determine when questions need to be answered, i.e., when decisions need to be made.		
c. Analyze and interpret evidence from Chapter V., Section J.		
d. Prepare report.		
e. Present and discuss report with decision makers.		
f. Adjust school health plan on the basis of the conclusions and recommendations.		

Use of this process can help you make decisions about the next steps to take. The decisions you reach can lead you back to sections of this manual which address your newly identified needs. Thus, compiling and presenting your evaluation report should not be seen as an end, but rather as a new beginning in your ongoing effort to improve school health.

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If This Profile Describes You...

An educator, administrator, physician, psychologist, social worker, nurse, allied health professional

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A professional or volunteer who seeks educational innovations and wants to share their insights and experiences with others

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