third edition

Health education

elementary and middle school applications

Telljohann • Symons • Miller

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HEALTH EDUCATION

Elementary and Middle School Applications

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PREFACE

The ideas, concepts, and challenges presented in this textbook have developed out of many different experiences: teaching elementary and middle-level children, teaching a basic elementary/middle-level school health course to hundreds of pre-service elementary early childhood and special education majors, working with numerous student teachers, and serving on a variety of local, state, and national curriculum and standards committees. Two of the authors of this book have taken sabbatical leaves from their university teaching positions and taught for one term in a local elementary and middle school. This has provided opportunities to use the various strategies included in this third edition.

We have written this textbook with several different groups in mind: (1) the elementary and middle-level education major who has little background and experience in health education but will be required to teach health education to his or her students in the future; (2) the health education major who will be the health specialist or coordinator in an elementary or middle-level school; (3) the school nurse who works in the elementary and/or middle-level school setting; and (4) those community health educators and nurses who increasingly must interact with elementary and/or middle-level school personnel.

The book is divided into four sections. Section I, *The Program,* includes chapters 1 and 2 and introduces the coordinated school health program, the relationship between health and learning, national health initiatives, and school health services. Section II, *The Tools of Teaching,* includes chapters 3, 4, and 5. These chapters provide information on developing the elementary and/or middle-level health education curriculum. Information on the basics for effective health education, developmentally appropriate practice, the National Health Education Standards, the use of computers, and instructional approaches is included. Section III, *The Primary Content,* includes chapters 6 through 14. These chapters are organized around the Centers for Disease Control and Prevention health risk priority areas and the skills needed to be a health-literate individual. Each of these chapters includes basic background information related to the content area, developmentally appropriate information and skills, sample teaching activities, related children's literature books, and related Web sites. Section IV, *The Secondary Content,* includes chapters 15 through 17. These are also content chapters that are included in most health education curricula. Each of these chapters also includes basic background information related to the content area, sample teaching activities, related children's literature books, and related Web sites.

FEATURES OF THIS EDITION

Updated Content

As experienced health educators and authors, we realize how important it is to provide students and teachers with the most current information available. Each chapter includes the very latest information. In addition, we have introduced many timely topics (e.g., violence prevention) and issues that are sure to stimulate student interest and class discussion.

Updated Developmental Appropriate Practice Recommendations

Each of the content chapters includes the developmentally appropriate concepts that should be taught at the K–2, 3–5, and 6–8 grade levels. These lists of concepts will help future and current teachers as they prepare their health lesson plans for their students.

Updated Sample Teaching Activities

We have added more sample teaching activities in each of the content chapters. We have also divided many of these activities sets into appropriate developmental levels (e.g.,

K–2, 3–5, 6–8). These activities not only focus on knowledge acquisition, but also on skill development.

Updated Recommendations of Children's Literature Books with a Health-Related Theme

Each content chapter includes an updated list of recommended children's literature books that are relevant for each developmental level. Franki Sibberson, a children's literature expert, assisted with the selection of recommended books for each content area. Special attention was given to books with a multicultural approach. In addition, award-winning books were also included in the recommended reading lists.

Updated Website Lists

Each content chapter also includes an updated website list. These websites are useful resources to current and future teachers in staying up-to-date on a variety of health topics.

ANCILLARIES

There is an accompanying Instructor's Manual and Test Bank to this text. The manual for this edition has been expanded and prepared by one of the co-authors. Learning objectives for each chapter and a lecture outline are included. The computerized test bank package is available to qualified adopters of the text in Windows and Macintosh formats.

ACKNOWLEDGEMENTS

Many people and organizations provided information, photos, and other material during the preparation of the manuscript. We offer our sincere thanks to all of these individuals. In particular, we would like to thank Terry Fell for providing many of the photos in this edition. We would also like to thank Franki Sibberson for developing the lists of related children's literature books that are found in the content chapters. Her insight into children's literature is an asset to this new edition.

The manuscript was greatly enhanced by the thorough review by Beth Pateman from the University of Hawaii. Her new ideas and suggestions were a wonderful contribution to this new edition.

We also want to thank the following reviewers for their helpful comments on various versions of this work:

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We hope that you enjoy the changes and additions made to the third edition of this book. We welcome any comments or suggestions for future editions. Best wishes and success when teaching health education to children and preadolescents.

Susan K. Telljohann
Cynthia Wolford Symons
Dean F. Miller

CONTENTS

SECTION

I

The Program

Section I begins by presenting a case for the importance of school health programs. It outlines the available research on the relationship between health risks of students and their academic achievement. This section then continues to describe the eight components of a coordinated school health program. Elementary and middle-level teachers should find this information to be a helpful orientation for all of the individuals in a school who affect the health of their students. Last, the health services component of the coordinated school health program and the role of the school nurse are highlighted.

CHAPTER 1

THE COORDINATED SCHOOL HEALTH PROGRAM

Organization, Structure, and Influence on Student Health and the Academic Environment

OUTLINE

HEALTH: A CONCEPT

When most of us review our understanding of the concept of health, we think only in physical terms. We limit our focus to such issues as preventing or managing illness, participating in fitness activities, or modifying our diets. Importantly however, the elementary and middle-level school classroom teacher must understand that the concept of health encompasses more than the element of physical well-being. Health is comprised of several dimensions.

The definition of health with which most people are familiar was provided by the World Health Organization in 1947. This definition suggested that health is best understood as ". . . a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity."[1] In this context, we are better able to identify that there are complex elements that influence personal health. More recently, however, definitions have emerged that help us to view the elements that influence our health in more personal terms. Rather than being understood in the context of complete well-being in all areas, more

contemporary definitions now suggest that health relates to our ability to function in the context of personal strengths and weaknesses. Bedworth and Bedworth clarified that health ". . . can be defined as the quality of people's physical, psychological, and sociological functioning that enables them to deal adequately with the self and others in a variety of personal and social situations."[2] Current definitions of health that enrich our understand of this complex concept share common integrated elements. In particular, there are five such elements that are foundational to understanding the health of school-age youth. These elements include the physical, emotional, social, spiritual, and vocational dimensions of health.

The *physical* dimension of health is not only the most often considered, but it is the most easy to identify. Frequently, we judge a person's general health status based on appearance, energy level, body weight, or the kind of physical fitness activities in which he or she participates. Our initial, and sometimes lasting, impression of a person's well-being results from observing behaviors in the physical dimension. If people are overweight or use tobacco products, we tend to assume that they are unhealthy. Certainly their general health status could improve by reducing participation in health risk behaviors. However, they may be very healthy in other dimensions.

The *emotional* dimension of health is focused on how individuals feel about themselves and how they express emotions. Emotionally healthy people possess strong coping skills and express their feelings in socially acceptable ways. They tend to have positive feelings about themselves. While this does not mean they never feel sad, angry, or depressed, emotionally healthy individuals express and deal with negative feelings in positive and socially acceptable ways. An individual with compromised emotional health may exhibit manifestations of a negative sense of self, or express feelings by acting out in inappropriate or even abusive ways. In some instances, people keep feelings bottled up, contributing to stress-related illnesses. Unhealthy emotional adaptations can result in a variety of physical and mental health disorders.

The *social* dimension of health is based on the social skills practiced by an individual. We all live and interact in a variety of different social environments—our home, school, neighborhood, and place of work. Socially healthy people feel comfortable in the company of others. They are concerned about others, and usually are well received in social contexts. Such individuals practice appropriate interpersonal skills and view themselves as contributing members of society. On the other hand, there are people who do not function comfortably or effectively in the company of others or whose concern focuses only on themselves. The behaviors of socially unhealthy people have a negative impact on their quality of life and on others with whom they work and live.

The *spiritual* dimension of health includes an individual's philosophy, values, and meaning of life.[3] Spiritual health is not defined in context of formal religious practice. Usually, it is understood more broadly. Spiritually healthy individuals integrate accepted, positive moral and ethical standards such as integrity, honesty, and trust into their lives. Such people demonstrate a strong concern for others regardless of gender, race, nationality, age, or economic status. A person with compromised spiritual health usually is not strongly motivated by moral or ethical principles. Often, such individuals do not believe that a higher process or being gives meaning to life. For such people, life can become isolated and troublesome.

The *vocational* dimension of health relates to the ability of individuals to collaborate with others in their professional, community, or work relationships. Vocationally healthy people tend to demonstrate a commitment to carrying out their share of responsibility to projects and activities. This commitment is demonstrated when individuals contribute their best effort to tasks to which they make a commitment. The vocational dimension of health is manifested also in the degree to which one's work makes a positive impact on others or the well-being of society. In this context, the behaviors of people with negative vocational health are not limited only to threats to individual goals. Compromised vocational health also can make a negative impact on the well-being of professional associates and the collaborative community or workplace environment.

When thinking about these dimensions of health, it is important to remember that balance among the dimensions is just as important as maintaining an optimal level of functioning within each. An individual who is very healthy in the physical dimension may be ineffective or abusive when expressing emotions. Also, it is quite possible for physically healthy people to demonstrate a poorly developed code of personal moral or ethical standards. Similarly, a person with a physical disability may be very productive, possess strong self-esteem, and interact very effectively and productively with others.

In this context, personal health can be compared to a wheel. The wheel is highly functional as long as all sides perform well independently, contributing to a whole that can operate smoothly and in balance. If the wheel is out of alignment or suffers a blowout, its entire function is compromised. Similarly, in persons with high-level personal well-being, each dimension of their health functions well and is balanced with the other dimensions. Problems, or a "puncture," in one or more of the dimensions of personal health, can render the individual less effective (figure 1.1).

When working with and preparing lessons that focus on promoting healthy behaviors among elementary and middle-level learners, teachers should remember the importance of each of the dimensions of health. In addition, teachers would be wise to develop learning activities that highlight the interrelated nature of these dimensions.

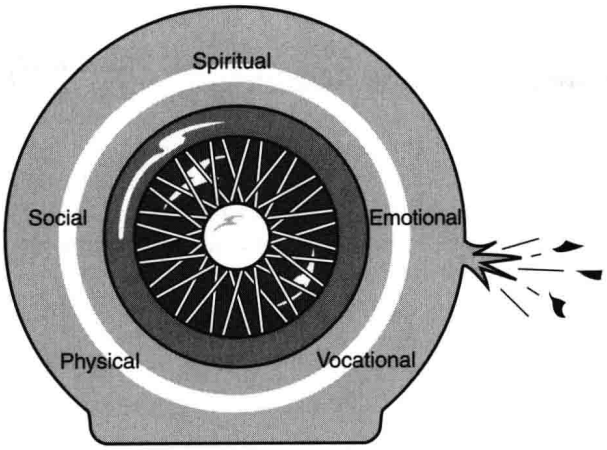

Figure 1.1

When a tire is punctured, the ability of the entire unit to function is impaired. The same is true of health. A malfunction to any of the five dimensions that influence personal health has a negative effect on the other dimensions. Can you think of other ways that this idea could be depicted?

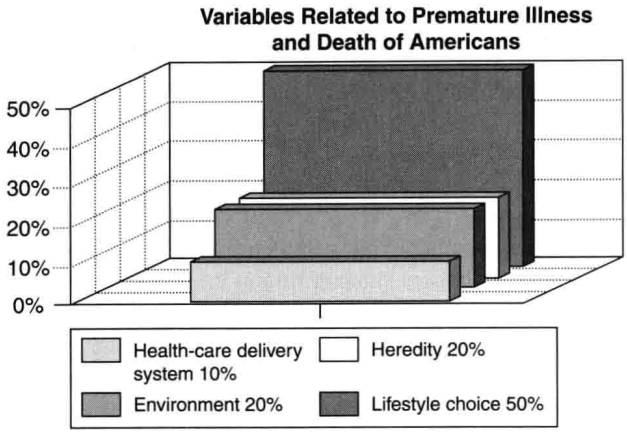

Figure 1.2

Approximately 50% of early death of Americans is related to the cumulative effects of our participation in risky health behaviors.

HEALTHY AMERICANS

In 1979, the U.S. government embarked on a multiyear initiative to improve the health status of all Americans. This agenda was started with the publication of *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention.* This document confirmed that the leading causes of illness and death of Americans had shifted significantly between the beginning of the 20th and the start of the 21st centuries. In the early 1900s, our leading causes of death were related primarily to infectious or communicable diseases. At this time, influenza and pneumonia, tuberculosis, and diarrhea and related disorders were among the leading causes of death of Americans. Because of improvements in sanitation and waste disposal, changes in public health policy, and medical discoveries including immunizations, Americans now live longer and healthier lives.[4]

Although our length and quality of life have improved significantly since 1900, *Healthy People* confirmed that four major factors continue to influence premature illness and death of Americans. Heredity (20%), exposure to environmental hazards and pollutants (20%), and inadequate access to quality medical care (10%) account for about 50% of our premature morbidity and mortality.[5] These variables largely are beyond the control of the individual.

Importantly, however, all citizens must be aware that approximately 50% of premature illness and death in the United States is related to the effects of our participation in risky health behaviors (figure 1.2).[6] As seen in the Consider This box on the causes of death, research has confirmed the ten most prevalent conditions at the time of death among Americans.[7] Importantly, however, most underlying causes of these chronic conditions can be traced to the cumulative effects of participation in risky health behaviors. These are behaviors over which we can exercise significant personal control (table 1.1).[8]

CONSIDER THIS

Ten Most Prevalent Conditions at Time of Death

Cause

- Heart disease
- Cancer
- Cerebrovascular disease (stroke)
- Unintentional injuries
- Chronic lung disease
- Pneumonia and influenza
- Diabetes mellitus
- Suicide
- Chronic liver disease
- HIV infection

Note: The most prevalent conditions at the time of death for most Americans are chronic in nature.

Source: McGinnis and Foege, 1993.

In specific, public health professionals at the Centers for Disease Control and Prevention have concluded that six preventable behaviors have been identified as priority areas for programming and educational intervention. Since most people initiate participation in these risk behaviors in their youth, advocates for student health would be wise to concentrate their efforts in the following areas:

- Tobacco use,
- Poor eating habits,
- Alcohol and other drug risks,

TABLE 1.1 Underlying Risk Behaviors Related to Leading Causes of Death

Risk Behaviors	Approximate Number of Annual Deaths	Approximate Percent of Annual Deaths
Tobacco	400,000	19%
Diet/Inactivity patterns	300,000	14%
Alcohol	100,000	5%
Infections	90,000	4%
Toxic agents	80,000	4%
Sexual behavior	40,000	3%
Firearms	35,000	2%
Motor vehicles	25,000	1%
Drug use	25,000	<1%

Note: We can influence the common lifestyle risks related to premature death. Annually, these health risks are the actual leading causes of death among Americans.

Source: McGinnis and Foege, 1993.

CONSIDER THIS

Health—A Personal Evaluation

As someone who will be teaching health concepts to elementary and middle-level schoolchildren, you will find it helpful to reflect on the status of your own health in the five different dimensions.

With which of the five dimensions that comprise the concept of health do you feel most comfortable from a personal point of view? In what types of activities do you participate to improve your health within each dimension? In what activities do you participate to improve your general health across the dimensions?

On the other hand, what dimension, or dimensions, of health seem to cause you problems? Why? What significant measures and activities might you undertake to strengthen this dimension of your state of health?

Discuss how this understanding of the concept of health will affect your teaching as an elementary or middle-level schoolteacher.

- Behaviors that result in intentional and unintentional injuries,
- Physical inactivity, and
- Sexual behaviors that result in HIV infection, other sexually transmitted diseases, or unintended pregnancy.[9]

Healthy People recommended the establishment of national health promotion goals that focus on five different age groups: *infants* (younger than 1 year), *children* (1–14 years), *adolescents and young adults* (15–24 years), *adults* (25–64 years), and *older adults* (over 65 years).[10] To achieve these broad age-group health goals, a national agenda directed at achievement of more than 200 specific measurable health-promotion objectives was formalized. These original health objectives, targeted for achievement by 1990, provided an organizational structure for coordinating program emphasis in health promotion and disease prevention during the decade of the 1980s. By 1990, success in meeting the objectives was mixed—some goals were met; some were not; others were surpassed.

After extensive review of the 1990 Health Objectives for the Nation, three broad health promotion goals were established to continue improving the health status of all Americans by the year 2000. These goals focused on:

1. Increasing the span of healthy life,
2. Reducing health disparities among Americans, and
3. Achieving access to preventive services for all citizens.[11]

To address these goals, 298 specific health promotion objectives were detailed. As a means to continue this national agenda, these goals were published in a document entitled *Healthy People 2000.* Specific activities to be carried out by national, state, and local agencies were identified to contribute to achieving these objectives by the turn of the 20th century.[12]

Several of the specific objectives to be achieved by the year 2000 identified a role for America's schools in promoting the nation's health. Recommendations specified the integration of planned sequential school health education in at least 75% of the nation's schools in kindergarten through twelfth grade.[13] While this objective has yet to be achieved, an ongoing commitment to promoting health for all Americans has been structured in the nation's health objectives to be achieved by the year 2010.

HEALTH IN THE ACADEMIC ENVIRONMENT

If you were asked to describe the school health program in the community where you attended elementary or middle school, what impressions would you highlight? Unfortunately, the school health program is not a priority in many school communities. When budget deficits occur, it is not unusual for health promotion activities to be cut. Findings from the national School Health Policies and Programs Study, sponsored by the Centers for Disease Control and Prevention, revealed that while many states employ directors to coordinate state-level school health initiatives, such professionals or activities rarely are part of the local district agenda.[14] In fact, the National School Boards Association has confirmed from estimates that full implementation of quality health instruction is found in only a disappointing 5% to 15% of the nation's schools.[15]

TABLE 1.2 National Education Goals

BY THE YEAR 2000

1. All children in the United States will start school ready to learn.
2. The high school graduation rate will increase to at least 90%.
3. All students will leave grades 4, 8, and 12 having demonstrated competence over challenging subject matter, including English, mathematics, science, foreign languages, civics and government, economics, the arts, history, and geography, and every school in America will ensure that all students learn to use their mind well so that they are prepared for responsible citizenship, further learning, and productive employment.
4. U.S. students will be first in the world in science and mathematics achievement.
5. Every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and to exercise rights and responsibilities of citizenship.
6. Every school in the United States will be free of drugs, violence, and the unauthorized presence of firearms and alcohol and will offer a disciplined environment conducive to learning.
7. The nation's teaching force will have access to programs for the continued improvement of their professional skills and the opportunity to acquire the knowledge and skills needed to instruct and prepare all U.S. students for the next century.
8. Every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children.

Source: U.S. Department of Education.

Recent attention to child and adolescent health issues in the school setting has evolved in context of a broad national commitment to educational reform. Since the early 1980s, a number of reports, publications, and legislative initiatives have been directed at improving the quality of education for American youth. This educational reform movement has led to a number of new and different initiatives whose primary focus has been on improving educational programming in basic or core academic subjects, including the language arts, mathematics, social studies, and the physical sciences.

Consistent with the ongoing commitment to education reform, the Goals 2000: Educate America Act was passed by the U.S. Congress in 1994. This legislation established eight National Education Goals targeted to be achieved by the year 2000, and mandated that content standards be developed by individual states. In addition, the legislation called for improved measurement of student achievement, and the establishment of voluntary standards in selected content areas, including English, history, science, mathematics, arts, geography, and foreign language (table 1.2)[16].

Unfortunately, academic activities to address the complex health issues confronting students have received little emphasis throughout this education reform movement. This omission was brought into clear focus in *A Nation at Risk,* a 1993 study conducted by the National Commission on Excellence in Education. This prestigious report, sponsored by the United States Department of Education, placed health education in a category referred to as an "educational smorgasbord." The report asserted that American education curricula had become "diluted . . . and diffused . . . ," and recommended that educational programs in this category be either eliminated or significantly reduced in emphasis.[17] Consistent with this clear message of educational reform, no direct mandate to improve health instruction was included in the specific goal statements of the National Education Goals. There is only one goal in this agenda that makes specific reference to child and adolescent health issues. This goal asserts that, "every school in America will be free of drugs and violence by the year 2000."[18] While this specific goal refers to the negative impact of specific student risk behaviors on the educational environment, the Goals 2000 agenda provided no specific governmental mandate for schools to participate in improving the health outcomes of learners.

At the same time that education reform activists were calling for decreased emphasis on a range of content areas including school health, many reports, including those related to *Healthy People 2000,* documented the poor state of health of American children. Local schools were expected to lead in the battle against student risk behaviors, including teenage pregnancy, alcohol and other drug abuse, adolescent suicide, and youth violence, but were provided with only weak governmental support for any school-based activities that did not directly target improved academic and proficiency test scores.

In response, the Secretaries of Education and Health and Human Services issued a federal interagency position statement in April 1994. This statement provided strong support for the establishment of comprehensive school health programs and the provision of school-related health services. This statement confirmed that a range of health and social problems have had an adverse effect on the culture of schools and the academic outcomes of students.[19] In this spirit, health-related objectives embedded in each of the National Education Goals were highlighted (table 1.3).[20]

TABLE 1.3 National Education Goals: Health-Related Objectives

- Children will receive the nutrition, physical activity experiences, and health care needed to arrive at school with healthy minds and bodies, and to maintain the mental alertness necessary to be prepared to learn **(Goal 1 objective)**
- All students will be involved in activities that promote and demonstrate good citizenship, good health, community service, and personal responsibility **(Goal 3 objective)**
- All students will have access to physical education and health education to ensure they are healthy and fit **(Goal 3 objective)**
- All teachers will have access to preservice teacher education and continuing professional development activities that will provide such teachers with the knowledge and skills needed to teach to an increasingly diverse student population with a variety of educational, social, and health needs **(Goal 4 objective)**
- Every school will implement a firm and fair policy on use, possession, and distribution of drugs and alcohol **(Goal 7 objective)**
- Every local educational agency will develop and implement a policy to ensure that all schools are free of violence and the unauthorized presence of weapons **(Goal 7 objective)**
- Every local educational agency will develop a sequential, comprehensive kindergarten through twelfth grade drug and alcohol prevention education program **(Goal 7 objective)**
- Drug and alcohol curriculum should be taught as an integral part of sequential, comprehensive health education **(Goal 7 objective)**
- Every school should work to eliminate sexual harassment **(Goal 7 objective)**

Source: U.S. Department of Education.

Support for broad-based, integrated school and community programs to address student health risks has emerged from another source. A growing body of literature now confirms that student health behaviors and academic achievement are "inextricably intertwined."[21] The American Cancer Society and representatives of over forty national organizations have concluded that "healthy children are in a better position to acquire knowledge," and cautioned that no curriculum is "brilliant enough to compensate for a hungry stomach or a distracted mind."[22] Many publications confirm a direct relationship between student participation in dangerous health behaviors and negative academic outcomes. Specifically, the consequences of student health risks have been linked to compromises in such foundational education elements as attendance, class grades, performance on standardized tests, graduation rates, and feelings of safety while at school.[23] In this context, as a means to improve academic outcomes, elementary and middle-level teachers are turning to this growing body of research as a source of support for integrating health promotion activities across the curriculum.

THE COORDINATED SCHOOL HEALTH PROGRAM

A Foundation for Understanding

Individuals who are concerned about the health status of elementary and middle-grade learners and the impact of their health choices on academic achievement would be wise to assume the role of advocate for a well planned and effective school health program. One might wonder about the value of science, mathematics, language arts, or social studies instructional activities to even the brightest or most talented students if these young people are at risk for alcohol or other drug-related behaviors, pregnancy, or the negative outcomes of violence. In this context, an investment in keeping students healthy must become part of the core responsibilities for which schools must assume leadership. Unfortunately, while it is common for professionals who work with elementary and middle-level students to mobilize to confront complex student health risks only when there is a crisis or when evidence confirms that such risks are having a negative impact on student learning, student advocates must be aware of the limited time that is available for school-based health promotion activities on an ongoing basis.

In the context of such time constraints, child health and education advocates must plan programming that is both effective and consistent with the educational mission of schools. Sound school-based programming is grounded in adapting what research has identified as best practice, to meet local needs. Only in this way can both the health and academic outcomes for students be realized.

The 1979 *Healthy People* initiative provided a starting point for organizing effective school health programs by defining the key concepts of *medical care, disease prevention,* and *health promotion*. Understanding these concepts helps student health advocates by framing boundaries of professional practice, identifying realistic program expectations, and targeting key stakeholders with a shared responsibility for the health of learners.

Medical care is defined with a primary focus on ". . . the sick," and involves activities designed ". . . to keep these individuals alive, make them well, or minimize their disability."[24] Each day, there are children enrolled in