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THE ROLE OF THE PUBLIC HEALTH NURSE  
IN THE IMPLEMENTATION OF AN EFFECTIVE  
SCHOOL HEALTH PROGRAM

BY

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## ABSTRACT

This is an investigation of the role of the public health nurse and the elementary public school teacher in the organization and implementation of an effective school health program with recommendations for improved school health services in the Winston Salem/Forsyth County schools.

Through a review of the available literature and a utilization of the knowledge and expertise gained in school health over a period of eleven years, an assessment is made, by this writer, of the relationship between the elementary public school teacher and the public health nurse, in attempting to identify and control health problems that interfere with learning.

Accepting the hypothesis that the knowledge, alertness, and cooperation of the teacher is the most essential, single factor in the development of an effective school health program, a project was initiated in an elementary school (kindergarten through grades four) involving this writer, a public health nurse, eighteen elementary public school teachers, and four hundred and ninety six students. The information gained during the implementation of Project SHINE (Seeking Health Improvements Needed Ecologically) strongly supports the need for more teacher involvement and participation in the delivery of health services to school children.



Based on these findings, this study includes recommendations for appropriate revision of present school health services as provided by the Nursing Bureau of the Forsyth County Department of Public Health.

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IN THE IMPLEMENTATION OF AN EFFECTIVE  
SCHOOL HEALTH PROGRAM

A THESIS  
PRESENTED TO  
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BY

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## INTRODUCTION

The general topic of this independent study will focus on the role of the public health nurse as it relates to the organization and implementation of an effective school health program in the public schools. This writer participated in Project SHINE, a Developmental Research Project, conducted in a kindergarten through grades four public school from January 1, 1975 through June 1, 1975. The knowledge gained by this writer during a period of eleven years of being actively involved in the implementation and co-ordination of school health services, provided by a public health department, was also utilized in attempting to identify the major deterrents to the administration of an effective school health program.

The relationship between the public school system and a county health department was explored. Teacher attitudes and needs, as well as the needs and constraints of the public health nurse in the school setting, were identified through written evaluations, and through a trial implementation of a comprehensive health program in the project school, using a team approach. The project was also an effort to ascertain whether greater teacher involvement and co-operation in the delivery of health services to school children would result in improved health care.

This writer has made a copy of this study available to the Director of Nursing of the Forsyth County Health Department and to the Winston-Salem/Forsyth County School Health Specialist. It is hoped that ultimately the knowledge gained through this independent study will be

utilized through appropriate revision of the school health policies and procedures, to be submitted to the Board of Education for approval and implementation, beginning in the 1975-76 school year. This study, involving the role of the public health nurse, is a segment of the total school health program to be submitted to the Winston-Salem/Forsyth County School Board by the school health specialist, employed by the school system.

Another project, involving the five-six grade level will be implemented during the 1975-76 school year, with a gradual progression through grade twelve, in an effort to determine the most effective way to meet the health needs of students at various grade levels. The material and recommendations in this study relate primarily to the kindergarten through grade four level.

## CHAPTER I

### THE DEVELOPMENT OF THE SCHOOL HEALTH PROGRAM

Health care systems in the United States are undergoing major revisions and expansion in order to meet the demands for more comprehensive and better health care for more people. Even with budgetary cutbacks more attention is being given to the health of the school child. In North Carolina Governor James E. Holshouser, Jr. and his staff have expressed interest in providing more services for the physically or mentally handicapped child.

In June, 1974 funds were appropriated to the State Board of Public Education for instructional personnel in the areas of psychological and guidance counseling, health and social services (Senate Bill 977)\*. This money was allocated to local administrative units on the basis of average daily membership in the amount of five dollars (\$5.00) per student. Some school systems across the state have used this resource to employ school nurses. A large portion of the money was used in the Winston-Salem/Forsyth County Schools to hire guidance counselors for the elementary schools for the 1974-75 school year.

Title XX, an amendment to the Social Security Act which became effective October 1, 1975, is yet another potential resource which may be directly or indirectly available to the school child. Title XX,

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\*A copy of Senate Bill 977 is included in Appendix I.



known as the Social Service Title, authorizes grants to states for services. Section 2001, part two and three of this admendment includes the authorization for appropriation of funds to: (1) "achieve or maintain self sufficiency, including reduction or prevention of dependency," and (2) "to prevent or remedy neglect, abuse, or exploitation of children and adults unable to protect their own interests, or preserving, rehabilitating, or reuniting families."<sup>1</sup> School systems and health departments have the option of applying for these funds through Social Service Departments, to assist with prevention and correction of health defects. At the present time, the Forsyth County School System has not done so.

Despite the fact that more federal and state funds are being made available for the remediation of health defects, it is the feeling of this writer that much planning needs to be done in order to be assured that the expansion and intensification of health services rendered to school-age children will result in earlier identification and better control of health problems that interfere with learning.

"There is serious debate regarding the value and role of school nurses reflected in the literature as well as a debate regarding the cost benefits of health services rendered to children in general."<sup>2</sup> There has not been adequate research done to justify a specific model for nursing service or for school health services as they have been provided in the past. "Unless it can be demonstrated that application of nursing skills in the educational setting enhances or promotes learning in the educational process, justification for retaining the traditional school nurse is certainly questionable."<sup>3</sup>



According to Hawkins, studies of the efficacy of school nursing functions are scanty and of questionable value.<sup>4</sup> Chinn further states that there is a great gap in research that can provide for rational choices on the part of the educational system in regard to use of nursing service. She cites three major problems:

1. There is no evidence regarding the desirability and reliability of using teachers to identify and refer students with health problems.
2. No substantial research is available which explores the relationship between health problems and school performance.
3. The research reported in relation to the role of the school nurse is limited which creates problems in attempting to determine what nursing skills may influence educational goals.<sup>5</sup>

The purpose of this study was to attempt to measure the effects of instructing teachers in methods of detecting health problems of children, to sharpen the observational skills of teachers, and to acquaint teachers with the various resources available for referral of children. Documentation will be provided as to actual services rendered in relation to referrals from teachers.

In order to fully appreciate some of the problems involved in the implementation of an effective school health program it is helpful to briefly review the development of the public health program through the centuries. Although concern for the health of the school age child dates back to the early Greeks, little effort was made in the United States toward health care for the school child until the end of the last century. During this time interest was aroused in the structure and improvement of school buildings, including improved sanitation to prevent the spread of disease. Most of the states in the United States

had established laws between 1880-1890 requiring the teaching of hygiene and physiology in the public schools. Physical education was gradually incorporated into the school curriculum during this time.<sup>6</sup>

The exposure of millions of health defects (especially hearing, visual, and dental) in the soldiers that were given physical examinations, beginning with World War I, up to the present time has emphasized the importance of protecting the health of the young child by developing health programs in the schools. The first school nurses came into being in 1902 in New York City. Nurses were assigned from the city health department to assist medical inspectors in observing school children for signs of diphtheria.<sup>7</sup>

The first function of the nurse in the school was to aid in the control of communicable diseases. Since that time the role of the nurse has been greatly expanded. School nursing as a professional entity is now in its eighth decade. The first guidelines to be utilized by school nurses in establishing standards of practice were prepared by "The Committee on School Nurse Policies and Practices of the School Health Association." The first statement entitled "Recommended Policies and Practices of School Nursing" was first published in 1955. Three revisions have been done since that time, the latest being published in 1974.<sup>8</sup>

Appreciation of the role of the teacher in the school health program has been emphasized many times. The knowledge, alertness and co-operation of the teacher is absolutely essential if a school health program is to be effective. A teacher who is living and working with children daily is the most appropriate person to observe their appearance

and behavior. A generation ago it was common practice for teachers to inspect every student in their classroom daily each morning as they arrived at school.<sup>9</sup>

Today, with many communicable diseases such as polio, diphtheria, smallpox, whooping cough, measles, tetanus, and others under control and with the advent of antibiotics, many teachers no longer feel it necessary to observe for signs of illness or potential health problems among their students.

As mentioned previously, current developments in the health care delivery system has focused renewed attention upon the health of the school child. In 1964 the Elementary and Secondary Education Act (ESEA) provided for supplementary health services to specifically designated children, determined to be educationally and economically deprived.<sup>10</sup> This allowed school systems to hire registered nurses to provide additional health services to children enrolled in this program. Although this project is gradually being phased out (approximately 300 kindergarten children in the Winston-Salem/Forsyth County Schools received this service in the 1974-75 school year), school systems have begun to request additional health services from public health departments who have traditionally provided health services to the public schools in North Carolina.

## CHAPTER II

### DESCRIPTION OF PROJECT S.H.I.N.E.

Project SHINE, a program designed to Seek Health Improvement Needed Ecologically, was initiated in an attempt to provide a proving ground for making many of the decisions concerning the implementation of a system wide comprehensive health program in the kindergarten-grades four schools.

An elementary school (kindergarten-grades four), with an enrollment of four hundred and ninety six students and eighteen teachers, was selected for this project. Socio-economic background of the students varied widely. The school, located in a rural area of Forsyth County, had students bused in from the ghetto areas of the inner city, as well as students from more affluent families residing in a semi-rural area. It was felt that this school was representative of the twenty four kindergarten-grades four public schools in the Winston Salem/Forsyth County School System. Forsyth County, located in the piedmont section of North Carolina, has a total of sixty four schools in the city-county system with a total enrollment of 45,000 students.

In order to access the health status of the children enrolled in the Winston Salem/Forsyth County Schools, this writer reviewed the annual school health reports for the past six years. The need to more efficiently utilize community resources in meeting the many and varied health needs of school children can be demonstrated by reviewing the results of the teacher-nurse health screening program in the



Winston Salem/Forsyth County Schools for the past six years. Table I will provide a summary of the data collected from the annual reports.

TABLE I

A summary of the number of students identified by public health nurses as having health defects and the percentage of students obtaining needed corrections in the Winston Salem/Forsyth County School System. (1969-1975)

School Year	Total Enrollment	% of students identified by public health nurses as having health defects	% of students having defects who obtained health corrections as a result of nursing intervention
1969-70	50,115	17%	43%
1970-71	49,677	17%	45%
1971-72	50,453	16%	43%
1972-73	44,766	15%	49%
1973-74	41,283	14%	41%
1974-75	44,750	13%	39%

It should be noted in Table I that for the past six years no more than 17% of the total student body were identified by the public health



nurse as having any type of uncorrected health problem. This would indicate that either a large number of children with health problems are receiving medical supervision or the actual number of children with health problems have not been identified, either by the teacher or the public health nurse.

For example, Wilner states that it is generally acknowledged that dental caries alone are found in 50-70% of all school children. "Health problems of lesser frequency include defective vision, defective hearing, obesity, orthopedic and postural defects, diseases of the nose and throat, and nervous, emotional and neurologic problems."<sup>11</sup>

In reviewing Table I, it is of even greater importance to note that no more than 45% of students having identified health problems obtained correction of these problems. Identification of health problems is of no value unless remediation of these problems can be obtained.

In order to evaluate the extent of health problems identified in the project school, as compared to the school system as a whole, additional data was reviewed on the project school. Table II is a review of the health screening program in the project school for the past five years. The data summarized in Table II, on page eleven, was obtained from annual reports, submitted by individual public health nurses and compiled by this writer.

According to the statistical information reflected in Table II, the number of children in the project school identified as having health defects from 1970 to 1974 was considerably less than the school system as a whole, with the exception of the 1971-72 school year. (See Table I on page nine)

TABLE II

A summary of the number of students identified by the public health nurse as having health defects and the percentage of students obtaining needed corrections in the project school. (1970-1975)

School Year	Total Enrollment	% of students identified by nurse as having health defects.	% of students having defects who obtained correction as a result of nursing intervention
1970-71	799	6%	34%
*1971-72	501	24%	61%
1972-73	430	10%	40%
1973-74	399	7%	47%
1974-75	494	4% (Prior to project Sept.-Dec., 1974)	5% (Prior to project)
	494	12% (During project Jan.-April, 1975)	66% (During project)

\*ESEA nurse assigned as full time school nurse (serving four schools).

In an analysis of Table II a significant increase is noted in the number of children who obtained health corrections during the 1971-72 school year. This may be attributed to the fact that a nurse employed solely as a school nurse under Title I (Elementary and Secondary Education Act) was assigned to the school that particular year. In addition to having additional financial resources available to students enrolled in the Title I program, the nurse also had more time available to implement the total school health program in her four assigned schools. She did not have the additional responsibilities assigned to public health nurses and thus was in a position to devote more time and effort to the school health program.

In evaluating the increase in the total number of students identified as having health problems in the 1971-72 school year (24% as opposed to 6% the previous year and 10% the following year) it would appear that nurses having school health as their only priority would tend to screen students more carefully, and perhaps work more closely with teachers in identifying students in need of health care. With the exception of the 1971-72 school year public health nurses have been responsible for carrying out the total school health program in the project school.

It may also be noted in Table II that the additional emphasis placed on the co-operative effort between the public health nurse and the teaching staff resulted in a dramatic increase from 4% to 12% in the number of children identified as having health defects after the teachers were involved in the initial screening process.

Of even greater significance is the large increase from 5% to 66% of children who obtained needed medical corrections during Project SHINE. The public health nurse had screened the entire student body (approximately 494 students), with the assistance of parent volunteers, prior to the beginning of the project. A different public health nurse was assigned to the school in January, 1975. The assigning of a different public health nurse to the school at the beginning of the project allowed for greater objectivity in identifying weaknesses in the present school health program.

One purpose of Project SHINE was to identify weaknesses in the existing school health program and to improve the delivery of health services. (Actual services now being offered by the Forsyth County Health Department will be discussed in Chapter III). Although many people, including school personnel and other community service agency representatives, were involved in the implementation of this project, this paper will deal almost exclusively with the activities of this writer, in the role of nursing supervisor, and the public health nurse assigned to the school. Ways in which the public health nurse can become a more effective member of the school health team is explored.

Each participant, including all teaching personnel, was presented with a copy of the Project SHINE guidelines, as proposed by the school health specialist. Input had been obtained from the Forsyth Health Planning Council, the Forsyth County Pediatric Society, and other community health disciplines. The following outline is a brief description of these guidelines.

#### GOAL

To improve the quality of life



### TARGET COMPONENTS

Personal health

Environment

Curriculum

### OBJECTIVES

1. Improve the observational skills of those who work with children.
2. Promote the prevention of dysfunction.
3. Promote primary recognition and care of dysfunction.
4. Improve the physical health of the child.
5. Improve the mental health of the child.
6. Provide a healthful, safe school environment for positive child growth.
7. Enhance the health curriculum and endeavor to make it a meaningful and helpful component of the classroom atmosphere.
8. Build into the school health program a system which will monitor its needs, seek resources to fulfill them and evaluate the effectiveness.

### METHODS

Prevention education

Prevention practices

Correction of disorders where possible

Injection of prevention education and practices into each component of the classroom curriculum and throughout the various areas of the school.

### IMPLEMENTATION

Workshops and/or programs for students, pilot school staff, parents and others as the need arises.

### EVALUATION

Group data obtained through use of a health opinion survey, overall attendance and academic records and an appearance rating scale (general, personal and environmental).



### CHAPTER III

#### BARRIERS TO COMMUNICATION BETWEEN HEALTH DEPARTMENTS AND SCHOOL SYSTEMS

In order to maintain good communication, as well as to be able to view problems more objectively, the school principal was asked to review and give approval of all activities initiated by the public health nurse, under the direction of this writer.

Following the initial meeting with the teaching staff, at which time each project participant gave a brief explanation of their role and distributed pre-evaluation forms, the school principal had a private conference with the public health nurse and this writer. The principal voiced the following concerns relating to the role of the public health nurse.

1. The nurse formerly assigned to the school (prior to the beginning of the project) had not involved the teachers in any screening activities.
2. No specific time was given for the nurse to visit the school. School personnel never knew when to expect the nurse on the days she was scheduled to visit the school.
3. The nurse did not always "show up" on the days she was scheduled at the school.
4. Follow up of referrals from teachers to the nurse was very slow.
5. Poor communication existed between the nurse and the school principal.<sup>12</sup>

This writer can identify a number of reasons why a lack of communication may exist between public health nurses and school

personnel. Public health nurses are involved in a generalized public health nursing program. Their activities include a visiting nurse service, work in the clinical setting, and in the home, as well as the school. Traditionally the visiting nurse service has been given priority over other public health nursing programs. In addition to this, many nurses feel more secure in providing a more structured type of nursing service, such as direct skilled patient care.

Public health nurses basically act as an advisor and consultant to school personnel and resent being asked to do minor first aid, to aid in transportation of students, and being given other responsibilities which a non-nurse could carry out effectively.

Most schools do not see health as a first priority. Principals have very little input into the time the nurse spends in school. The nurse, in the school setting, is more or less an independent agent and the principal dislikes having a minimum input into the coordination of health services with the health department. The health department is responsible for the school health program in the Winston Salem/Forsyth County School System. The services that are provided are in accord with the recommendations made by the North Carolina Department of Human Resources and the North Carolina State Department of Public Instruction. The school health policies are set up by the Superintendent of Schools and the Health Director. In the 1974-75 school year there were thirty three public health nurses and one ESEA nurse to provide services to approximately 44,750 school children.

The public health nurse is part of a team which includes teachers, social workers, guidance counselors, and others who are

concerned with the child's overall physical and mental health. If the nurse is properly utilized she is in a position to act as a catalyst to bring together many people and groups in order to provide adequate health services for the school child. She helps co-ordinate the work of the physician doing school physical examinations, the teacher, parent, voluntary health agencies, medical clinics, and the family physician and dentist. In addition she may act as an advisor and consultant to the health teaching program of the school.

Another important role of the nurse is visiting families to make certain that children get proper referrals and needed treatment from physicians and dentists. In many instances nurses assist families in obtaining needed corrections by acting as a liason between the family and available community resources.

As health problems and medical information have changed, the responsibilities of the school nurse have also changed. While the nurse is willing to assist with first aid during the time she is on the school grounds it is not practical that she be the only person responsible for this. Much of the nurses' time in school is taken by conferences with school and community-health personnel, counseling with students regarding health problems, and rescreening of students identified by teachers as having possible health defects.\* It should be kept in mind that the school nurse by law cannot give a child any medication - not even an aspirin.<sup>13</sup>

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\*A specific job description, prepared by this writer in 1970, for the purpose of informing school principals of the role of the public health nurse in the school is included in Appendix II.

Teachers frequently make statements to public health nurses such as: "You don't do anything but school work, do you?" Despite job descriptions of the public health nurse being sent to all principals, many still do not understand the many and varied responsibilities associated with public health nursing.

Patterns of administration of local school health programs vary widely in scope, organizational structure, and administrative responsibility. In some communities, the school health program is administered solely by the local board of education. In some areas the program is under the direction of a local school health council. Joint administration, by education and health authorities appears to be increasing slightly.<sup>14</sup>

There are feelings on the part of some educators that school nurses should be part of pupil personnel services rather than local health departments. However, this writer feels, there are several advantages to having school nurses that are associated with a public health department.

1. The health department has supervision over certain areas such as sanitary regulations and environmental controls which affect all the schools in the community.
2. The interest of a public health department is comprehensive. The child is seen in the context of his total family and community environment.
3. Public health officials may be able to identify gaps in health education and be able to offer assistance with curriculum planning and health education.
4. Health departments have close working relationships with hospitals, clinics, and other community agencies and can, in some cases,



expedite services.

5. It is economically feasible and duplication of health services is avoided. Isolation of the school health program from the over-all community health programs is unsound administratively, and can lead to inefficient, costly health service.

In every situation there are both advantages and disadvantages. This writer feels disadvantages to public health nurses providing health services to the schools could include the following points.

1. A minimum of co-ordination may exist with the health department.
2. School health services may be low priority compared to other public health nursing programs.
3. Limitation of personnel and lack of adequate screening equipment may reduce the effectiveness of the public health nurse.
4. Difficulty may arise in attempting to co-ordinate schedules of public health nurses and school personnel in an effort to deliver health services efficiently.
5. A lack of centralization of organization and administration between the health department and school system results in confusion and communication barriers.

Following the initial meeting with the principal, this writer, along with the public health nurse, identified several problems which would be a deterrent to carrying out the health program effectively in the project school.

1. Health records were located in a file not readily accessible to the nurse. The records had not been kept up to date and "teacher observation" sheets were blank.



2. The health room was located downstairs away from the telephone, office, or health records.
3. First aid supplies were kept by the secretary in the office rather than in the health room.
4. The school did not have a written plan for handling emergencies. Although two teachers were trained in first aid, no one was assigned to act in case of an accident.
5. The school did not have on file a list of known students with serious health problems.
6. First aid supplies did not include pressure bandages, splints, sterile gauze, bandage scissors, or peroxide, as designated in the first aid supply list, provided by the health department.
7. Teachers did not have individual first aid kits.
8. Teachers had not been involved in the mass screening program, held in the fall.
9. A teacher-nurse workshop had not been held at the beginning of the school year.
10. The teaching staff had not involved the public health nurse in the area of health education.
11. Some teachers expressed confusion as it related to the exact role of the public health nurse.

In addition to the problems identified by the public health nurse and the school principal, the pre-evaluation form completed by the teaching staff revealed a definite need for additional health knowledge on the part of the classroom teacher. Table III is a summary of teacher needs as identified on the pre-evaluation form.

TABLE III

Summary of teacher needs and attitudes relating to school health program as reflected on pre-evaluation form.\* 18 teachers participated.

Needs	Number Requests	Negative Response	No Response
Assistance with learning to identify students with health problems	16	1	1
Information regarding food handling regulations	6	12	0
Revision of school health record	3	11	4
More utilization of the public health nurse in classroom presentations relating to health	16	1	1
Information relating to N. C. State Immunization Laws	10	8	0
Information on the most common causes of communicable diseases among school children	8	9	1
More knowledge relating to dental health	2	16	0
Attitudes	Positive Response	Negative Response	No Response
Felt students were aware of environmental safety factors, including dangers associated with rats, roaches	11	4	3
Felt students violated good health practices frequently	14	4	0
Would be willing to participate in an informal student health observation and evaluation program	11	7	0

\*A copy of the pre-evaluation form used in Table III may be found in Appendix III.

As indicated in Table III, a large majority of the teachers in the project school felt they needed assistance in the following areas:

1. Learning to identify students with health problems (88.8%).
2. Interest in greater utilization of the public health nurse in health teaching in the classroom (88.8%).
3. Desired more information regarding common causes of communicable diseases among school age children (44.4%).

The pre-evaluation survey also revealed that 77.7% of the teaching staff felt that their students frequently violated good health practices. Also, 61% felt they would be willing to participate in an informal student health observation and evaluation program. However, all teachers participated in the project.

## CHAPTER IV

### ACTIVITIES INITIATED BY PUBLIC HEALTH NURSE DURING PROJECT S.H.I.N.E.

#### TEACHER-NURSE SCREENING AND OBSERVATION

In an effort to meet the expressed needs of the teaching staff the following activities were initiated by this writer, serving as the public health nursing supervisor, and the public health nurse assigned to the project school.

A total of three teacher-nurse workshops were held. The first meeting involved a general discussion of appropriate screening methods for teachers. A film titled Looking At Children was shown. This film, available from the Metropolitan Life Insurance Company and the North Carolina Department of Human Resources, reflects the present day health needs of school children and depicts the teacher's role as observer and member of the health team.

Teachers were urged to become actively involved in a day to day health screening process with students in their class. This, of course, does not mean every child's vision, teeth, height and weight are to be checked and recorded daily. Unfortunately, many teachers feel this is what constitutes a health screening program. Once this initial screening has been accomplished (hopefully by volunteers) no further effort need be expended by the teacher in this direction. It was pointed out that teachers see a child in the context of a group of children his own age. This is a valuable frame of reference for detecting clues to many problems.



The school principal did not attend the workshops. It is felt that greater teacher participation would have been possible had the principal demonstrated greater interest in the project.

Inspection or screening may not be an appropriate term to use in referring to the teacher's appraisal of the child's health. According to Anderson, evaluation and observation are better terms. "Evaluation of a child's health denotes a thorough systematic appraisal and should be made at about the end of the first month of school. This evaluation should be supplemented by observations from day to day to note any deviations from the acknowledged health patterns of the youngster."<sup>15</sup>

Although the primary responsibility of the health of the school age child rests with the parent, the school, the health department, and other health related community agencies should be interested in assisting the parent in building up and maintaining the maximum level of health for every child. This includes providing the kind of health education that will develop competence in the child to deal with health problems as an adult.

The school legally has the authority of a parent. "The classical decision of the Supreme Court of the State of Nebraska in 1933 is considered the legal authority on the principle of the school in loco parentis (in place of the parent) in matters of school health."<sup>16</sup> "In 1955, when the school laws were recodified, G. S. 115-204 of the 'Public School Laws of North Carolina' made 'screening and observation' a legal responsibility of teachers of grades 1-12."<sup>17</sup>

Allowing the child to realize his maximum potential should be the primary consideration. In addition to providing assistance to the child



identified as having a health problem, efforts should also be directed to the normal, well child in order to build up and maintain good health.

In an effort to encourage day to day observations, a health check sheet was prepared and teachers were asked to submit a monthly report to the public health nurse.\* This report included any suspected health problems noted among students in the classroom. Height and weight charts were also given to each teacher, including the normal range for boys and girls in the six to twelve age group.

Table IV compares the results of the teacher observations and evaluations of the student body with the number of students screened and referred as a result of the mass screening of the total student body by the public health nurse, assisted by volunteers, at the beginning of the school year. To appreciate fully the important role of the teacher in the identification of health problems among school children Table IV also shows the results of the screening, referral and correction process of the public health nurse, following input from the teaching staff.

Initially the public health nurse had only made twenty referrals (eleven visual defects and nine dental defects) as compared to fifty seven referrals after the teaching staff had become involved in the screening process. It is also significant to note that teachers identified more behavioral problems as compared to physical defects identified by the public health nurse. "An understanding and sympathetic teacher or nurse can help pupils develop good emotional and social health."<sup>18</sup> Helping the child to become a recognized member of a group will help reduce behavioral problems in the classroom.

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\*A copy of the monthly check sheet used by the teaching staff is included in Appendix IV.

TABLE IV

Summary of types of health problems identified and referred by public health nurse prior to beginning of project as compared to problems identified and referred by teaching staff and public health nurse during project.

Health Problem	Behavior	Hearing-Speech	Visual	Poor Health Practices	Orthopedic	Poor Progress in School	Respiratory	Poor School Attendance	Skin and Scalp	Dental
Referred by public health nurse prior to project (494 screened)			11							9
Referred by TEACHING STAFF (494 screened)	69	5	11	8	12	3	17	28	12	9
Referred by public health nurse during project (185 screened)	6	9	15	5	1	1	2	0	3	15
Obtained correction as result of nurse referral	6	9	9	5	1	1	2	0	3	3

According to Table IV, the single, largest health problem of concern to the teacher in her daily observation of the students in her class is that of abnormal or disruptive behavior (13.96%). Other problems identified by teachers included; hearing (1.01%), visual (2.23%), orthopedic(2.43%), respiratory (3.64%), dental (1.82%), poor health practices (1.62%), poor progress in school (.6%), and poor school attendance (5.6%). These problems can be compared to the findings of the public health nurse who had screened the entire student body in the

fall prior to the project beginning in January. The only problems identified were visual (2.23%) and dental (1.82%). This would reinforce the hypothesis that the teacher is the most appropriate person to identify children with health problems in his/her classroom.

In the past, public health nurses have not assumed a significant role in working with teachers who have students who are primarily behavioral problems or who manifest poor progress in school. Yet during the project more teachers referred behavioral problems than any other single defect.

According to Ferinden, the school nurse occupies an important position in helping identify children who have a learning disability in that she has the professional training not only to identify such children but follow their growth and development for several years. "Aside from delayed motor development it appears that hyperactivity can be considered as the single most important motor characteristic suggestive of potential learning problems."<sup>19</sup>

Public health nurses should work closely with family pediatricians, school psychologists, and other community resources if she suspects a child may have a learning disability, regardless of whether the cause may be delayed motor development, hyperactivity, or other somatic abnormalities.<sup>20</sup> Many of these problems can contribute to unacceptable behavior in the classroom.

Through consultation and follow-up with teachers, parents, and the child involved, the public health nurse found that most of the sixty nine children referred because of behavioral problems came from broken homes or an environment in which there was much marital discord.

Six of these children obtained additional counseling and/or medical evaluation, resulting in a significant improvement in their classroom behavior.

Only two teachers on the faculty indicated that they had not identified any health problems among students in their class. Subsequent screening of these two classes by the public health nurse and dental hygienist revealed five visual defects, two dental problems, and one ear infection.

Although only three teachers indicated they felt a revision of the health record was needed they seemed to find the individual check sheet in recording observations much simpler to use. Teachers frequently sought out the nurse during her regularly scheduled visits (two times per week) to discuss specific health problems among the students in their class.

In order for any health program to be truly effective it is essential to have administrative support and teachers who see the necessity for the "screening and observation" law.

#### CONTROL OF COMMUNICABLE DISEASES

In recent years the declining levels of immunization against measles, poliomyelitis, and diphtheria are being viewed with increasing alarm in the medical profession. Because of a threat of epidemic polio in central city poverty areas and some rural sections, and because the 1970 U. S. Immunization Survey indicated such a decrease in immunization levels of young children, a massive campaign to raise the immunization levels has taken place across the country. In North Carolina the immunization level of two year olds was increased from



62% to 83% in 1972. This was as a result of immunization representatives, employed by the North Carolina State Department of Human Resources, who worked closely with local county health departments.<sup>21</sup> Parents of newborns are urged to take advantage of free immunization clinics.

Effective July 1, 1973 the North Carolina state immunization law was changed to read as follows: "No teacher or principal shall permit a child to continue in school after expiration of thirty days after the first day of admission unless the parent or guardian responsible for such child presents evidence of immunization," i.e., at least three doses of diptheria, whooping cough, tetanus, polio and one dose of measles vaccine.\*

Prior to this change the law stated that school authorities were not allowed to admit a child without the above mentioned immunizations. The previous law had been totally ignored by many school officials and principals because the exclusion of many children at the beginning of a school year meant the loss of a teacher due to the lowering of the enrollment.

The change in the immunization law which allowed a student to remain in school thirty days before obtaining needed immunizations, has resulted in a much stricter enforcement by the school principals. In order to keep the school informed of the current status of children needing immunizations, more follow-up is needed by the public health nurse.

During the 1974-75 school year at least one principal contacted state legislators in an effort to shift the responsibility of enforcement of the immunization law from the school to the health department.<sup>22</sup>

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\*North Carolina state law G. S. 130-87.

It is the feeling of this writer that the responsibility of enforcing the immunization laws should remain with the schools.

More than 50% of the teaching staff in the project school indicated they needed to know more about state immunization laws. A teacher-nurse workshop was devoted to review of required immunizations. Each staff member was given a copy of the current immunization law. By January, 1975 the project school was 100% in compliance with state immunization laws. This would seem to indicate that more teacher education in this area would result in more strict adherence to state immunization laws.

Emphasis was placed on learning to read an immunization record correctly. Resources available to children needing immunizations was also stressed. The school administration has insisted on compliance with state immunization laws during the past two years. As a result, teachers and principals have become more concerned. It has been the experience of this writer that once parents realize that the school intends to enforce the immunization law it is seldom necessary to exclude a child from school.

In response for more information regarding the most common communicable disease among school children a chart was prepared for each teacher using Control of Communicable Disease in Man as a resource.\*23

Pediculosis (head lice) was a primary concern among the teachers because ten cases had been identified earlier in the school year. Both

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\*The chart prepared by this writer to assist the teaching staff in identifying various communicable diseases can be found in Appendix V.

pediculosis and scabies (body itch) appear to be more prevalent during the past few years, as noted by the increased number of cases referred to the health department. Much time was spent by the public health nurse in counseling parents and teachers regarding treatment and control of various communicable diseases.

A recent report (January, 1975) on "Health Care For Our Public Schools" prepared by the Forsyth County Pediatric Society indicated that children with pediculosis should be excluded from school until treatment is instigated. Another statement found in this report stated "Toilet seats, shared clothing, drinking glasses, toilet articles, and books are unimportant in propagation of most infectious diseases in school."<sup>24</sup>

Since physicians are becoming more relaxed regarding the spread of communicable diseases it is even more important that teachers stress hand washing and good personal hygiene among their students. Impetigo, pediculosis, scabies, conjunctivitis, and ringworm are some of the most common communicable diseases found among school children. Impetigo especially can be transmitted on books and other objects. Teachers need to be aware of how these diseases are spread.

A first aid kit containing alcohol, bandaids, surgical soap, antiseptic, applicators, and cotton balls was prepared for each teacher. In addition to caring for minor injuries the teacher can also use this kit as a teaching aid in helping students learn to control some of the communicable diseases common among school children.

Chickenpox, conjunctivitis, and pediculosis were communicable diseases identified among students in the project school. Assisting teachers in learning to identify communicable diseases in the early stage is one of the most effective means of control. Prompt follow-up

by the public health nurse, including counseling of parents and assistance with finding appropriate resources for treatment, is an important role of the public health nurse.

#### PLAN FOR HANDLING EMERGENCIES

Another vital aspect of a comprehensive school health program in- to which the public health nurse should have input is in the area of emergencies and accidents.

In modern school life the prevention of accidents is as important as the prevention of communicable diseases. Accidents are a greater health threat (in terms of numbers) than infectious diseases. The positive approach is the most effective method to prevent accidents.

Studies and survey reveal that about 43% of accidental deaths among school age children are connected with school life. Of these, 20% of the 43% occur in the school building (gymnasium, halls, stairs, shops and laboratories) and 6% of the 43% occur on the way to and from school. Children in the fourth to ninth grade tend to engage in vigorous activity that lead to a greater accident rate.<sup>25</sup>

Knowing just how much first aid to give a child at school can be a dilemma for public health nurses. If enough is not done the child may suffer. If too much is done the nurse (or the school) may suffer if the parents take legal action. Since the ultimate responsibility for the child's health is with the parents, the role of the public health nurse should be that of giving immediate attention to the injury or illness, notifying the parent of the action taken, and providing them with guidance and direction in the child's follow-up care.

Teachers and public health nurses run the risk of a law suit from injured students because of alleged negligence that causes injury.



In general, negligence is any conduct below the legally established standard for the protection of others against unreasonable risk of harm. There are basically two types of negligence.

- A. An act that a person of ordinary prudence or judgment would realize involves risk to others.
- B. Failure to act for the protection of another.<sup>26\*</sup>

Every school should have a plan for handling emergencies and accidents. Teachers should be made fully aware of the legal implications if a pupil is injured because a teacher's actions were not those of a prudent person or if the teacher fails to act.

According to Mr. Doug Pungner, attorney for the Winston Salem/Forsyth County Schools, a teacher may be liable if a lawsuit is instituted by the parents of an injured child. Each teacher is responsible for his/her negligence that results in physical harm to others. A teacher's administrative superior will be held liable when he directs the teacher to do some dangerous act resulting in injury to a pupil or fails to correct a hazardous situation that has been reported to him by a teacher. The teacher must have tangible evidence that he/she notified the administrator (principal) of the hazard. A school board is usually not liable for its own negligent acts since it is a government entity and thus is immune to lawsuit unless the board consents to a suit.<sup>27</sup>

Recently the trend has developed toward abolishing the theory of nonliability for school boards. (School board may be sued up to the amount of liability insurance they hold if consent is given.) However,

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\*For a more detailed discussion of types of negligence see Appendix VI.

as long as school boards are not liable the teacher must proceed with the knowledge that he/she alone may be held liable for any pupil injury. Usually the court would not hold a teacher liable unless he/she has shown deplorably poor judgment, taking into consideration he/she has to provide supervision for thirty to forty students at the same time.<sup>28</sup>

The best safeguard against a lawsuit is a well planned, functioning program for the prevention of accidents to pupils and the correct handling of emergencies. At least some of the school personnel should have had training in first aid. Teachers should be encouraged to take at least a basic course in first aid.<sup>29</sup>

Directions for securing medical care for the child when the parents or guardian cannot be located should be written into the child's permanent health record and up-dated each year. When parents are unable to make arrangements for transportation of the child from school to home it should then become the responsibility of the principal or his designee.\*

On May 6, 1975 the House Judiciary I Committee of the North Carolina General Assembly voted a favorable report on House Bill 652, an act which authorizes health services for minors. This bill is a legislative objective of the North Carolina Public Health Association. If the bill is passed a physician may provide certain medical services to a minor without parental permission. The bill states than any minor may give effective consent for medical health services for the prevention, diagnosis, and treatment of (1) venereal disease and other communicable diseases, (2) pregnancy, (3) abuse of controlled substances and alcohol, and (4) emotional disturbances. The minor, and not the parent, would be

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\*See Appendix VII for a sample plan for handling school emergencies.

liable for payment for such services.

At the present time, according to North Carolina State law, a minor may be treated for a venereal disease without parental knowledge or consent. In addition to having a written plan for handling emergencies school administrators should be aware of current laws regarding medical treatment of minors. Students should be informed of the school's policy regarding the involvement of parents as it relates to venereal disease and other medical conditions which may not require parental permission for treatment in the future.

#### HEALTH EDUCATION

Health education is usually given a low priority in the public schools. The recent increase among students of some communicable diseases such as scabies, pediculosis, and venereal disease, as well as the rise of drug abuse among young people, appears to be making some changes in the way schools view health education.

For example, the incidence of venereal disease, specifically gonorrhea, is increasing in Forsyth County and remains one of the major communicable disease problems. The number of cases of gonorrhea treated at the Forsyth County Health Department increased from 759 cases in 1967 to 2070 cases in 1973. The gonorrhea rate per 100,000 population increased from 340 in 1967 to 928 in 1973 and continues to rise.<sup>30</sup>

Some of the apathy relating to health education and the weaknesses of public school health programs are attributed to the following factors.

1. Inadequate training of teachers during college preparation.
2. Lack of enforcement of mandatory state regulations concerning the teaching of health.

3. Resistance and apathy of teachers.
4. Indifference and low priority of health among school administrators.
5. Difficulties in building student interest and involvement.
6. Parental resistance and indifference.<sup>31</sup>

It was interesting to note that all but two teachers, who participated in the project, indicated that they would like to utilize the public health nurse more in classroom presentations. The following activities were initiated by this writer to stimulate a greater interest in health education on the part of both teachers and students.

1. A printed sheet was distributed to all teachers indicating a list of available films and literature as well as selected health topics with which the public health nurse was prepared to offer assistance.\*
2. A packet of health education materials and available resources prepared by the Forsyth County Health Education Council was given to each teacher.\*\*
3. Teachers were made aware of other health education resources available through the health department. These included a nutritionist, dental hygienist and sanitarian. (The dental hygienist conducted a comprehensive dental health program as part of the project.)

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\* The list of health topics public health nurses are qualified to assist with is included in Appendix VIII.

\*\*An evaluation of these materials by the teaching staff is included in Appendix IX.



4. This writer was also requested to assist in reviewing a Drug Education Series to determine the appropriateness, accuracy and relevance of the materials for students in kindergarten through grades two. This is indicative that the public health nurse has an important contribution to make in an area in which she has not been utilized in the past.\*
5. A special project in nutrition, involving a third grade class, was initiated by this writer and included the following activities:
  - a) Discussion of iron rich foods by the county nutritionist.\*\*
  - b) A hemoglobin test was done on all children in the class, with the assistance of the health department laboratory technician. Four children out of the eighteen tested were found to be anemic. These children were given an iron supplement and encouraged to eat foods high in iron. Subsequent testing of these four children at the end of the school year revealed a normal hemoglobin.\*\*\*
  - c) A "tasting party" was held with the assistance of the Director of Food Services. Two students, the teacher, and this writer were given an additional opportunity to promote health education by appearing on a local TV station to discuss the results of the project.\*\*\*
  - d) The children planted tomato and lima seeds and watched them grow.
  - e) Several films on nutrition were viewed by the students.

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\* Appendix X is a copy of the public health nurse report on this material.

\*\* A copy of the lesson plans developed by the nutritionist may be found in Appendix XI.

\*\*\* A sample permission form and letter to the parents of children who participated in this project is included in Appendix XII.

Despite these efforts, the educational resources were poorly utilized by the teaching staff. For example, several teachers had indicated an interest in having their class learn more about food handling and environmental safety. The public health environmental engineer offered to speak to classes as well as take a representative from each participating class on an inspection tour of the school. A schedule was given to the school principal. None of the teachers participated. However, several teachers later stated they did not know a schedule had been posted. This would indicate that constant attention should be given to maintaining follow-up and good communication.

Another reason that the educational resources were not utilized may be due to the fact that the project started in January after the school curriculum had already been prepared and partially implemented.

This writer agrees with Aubrey in stating that health educators need to have a greater input into redirecting present health programs and assessing current efforts in this critical area. Health education must be made more meaningful and relevant to the student. This can only be done through administrative support on the part of the school system and a willingness on the part of the public health nurse to direct time and effort in the concentration of health programs at selected grade levels in a more organized and structured manner.<sup>32</sup>

The final effort in completing the project related to involving members of the PTA (Parent-Teacher Association). A meeting was held with the PTA president in the project school and a member of the PTA council. Enthusiastic support was voiced by these individuals toward establishing a more effective school health program. The following suggestions were

offered as possible methods of increasing parent-teacher participation in the school health program.

1. If parent volunteers are utilized in the health screening process the procedure should be done by individual classes with the assistance of the teachers as opposed to a "mass screening" program in the auditorium or gymnasium.
2. Emphasis should be placed on the health program during teacher "professional work days" in the fall before school actually begins. The legal responsibilities of teachers should be clearly defined by the school administration at that time. This should be followed up by a teacher-nurse workshop in every school.
3. The public health nurse assigned to the school should be invited to attend the first "open house" PTA meeting in the fall, and should make every effort to attend.
4. In order for parents to be aware of the health assessment their child receives at school it was suggested that teachers inform parents of all positive screening results as well as health problems identified. A note could be included in the first progress report stating something to the effect that the child had been screened and no health problems were identified.
5. PTA's should be involved in special projects relating to improved health services in the school. For example, if the school and health department budgets do not approve an audiometer and telebinocular (visual and hearing testing equipment) for every school this could be a worthwhile project for the PTA.\* <sup>33</sup>

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\*A justification prepared by this writer and submitted with the 1975-76 health department budget for this equipment is included in Appendix XIII.

## CHAPTER V

### EVALUATION OF PROJECT S.H.I.N.E.

The nursing profession has a great responsibility in meeting the challenge to provide evidence that will give reliable and valid direction for the development of their own practice in delivering health care to the school age child.<sup>34</sup>

This study has attempted to evaluate nursing intervention in regard to specific health problems and needs. The effects of instructing teachers in detecting health problems of children have been explored by emphasizing items for teachers to observe, nursing service available for referral of children, and actual services rendered in relation to referrals by teachers.

The principal and teaching staff were asked to evaluate project SHINE. Table V is a summary of this evaluation.\* It can be noted in Table V that teacher response was very positive in relation to identified needs and what the role of the public health nurse should be in implementing an effective school health program. However, it was very obvious that the teachers still did not see themselves as the person/s responsible for initially screening all students for health defects. All but four teachers indicated they would not be willing to assume the responsibility of initially screening all students for possible health defects.

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\*Appendix XIV contains a copy of the evaluation form used.



TABLE V

Summary of results of teacher and principal evaluations of Project SHINE.  
(1 principal and 18 teachers participated.)

Factors Teachers Considered Important In Implementing An Effective School Health Program.	Positive Response	Negative Response	No Response
Teacher-Nurse workshop at beginning of every school year	13	6	0
Written plan for handling emergencies	16	0	3
Greater clarification of the role of the public health nurse in the school	12	0	7
Assistance with screening and observation techniques	12	0	7
Communicable disease control and school exclusion rules	13	0	6
Availability of medical and other community resources to students	10	0	9
Willingness to assume responsibility of initially screening all students	4	15 (including principal)	0
Planned "Series of Workshops" to strengthen "Observational Skills of Teachers"	8	9	2
Additional emphasis on health during Project SHINE increased awareness of health problems among students in the classroom	15	4	0

TABLE V continued

Summary of results of teacher and principal evaluations of Project SHINE.  
Nutrition component.

Factors Teachers Considered Important In Implementing Nutrition Component of School Health Program.	Positive Response	Negative Response	No Response
Felt nutrition education in the elementary grades is important	13	0	5
Would like a review in basic nutrition	3	9	6
Requested more teaching suggestions and aids in teaching nutrition	9	1	8
Plan to use available resource people in the future	9	2	7
Students have improved eating habits since studying about food	8	2	8
Have observed students in class who are obviously malnourished	4	8	6
Students appear to be more aware of importance of a good lunch	13	0	5
Have made use of materials provided by the nutritionist	11	2	5

Teachers who are engaged in direct or indirect health teaching have the most clearly defined opportunity to observe and screen students for health problems and assist the student in attaining and maintaining the desired level of well being. One of the greatest weaknesses in the present school health program is the unwillingness of teachers to assume the responsibility of initially doing the health screening of all students, as prescribed by North Carolina State Law.

An increase from 4% to 12% was noted in the identification of health problems and an increase from 5% to 66% in the correction of identified health defects was noted after the teachers had become actively involved with observation and evaluation of students in their class. (See Table II on page 11) Despite this information being shared with the teachers it is apparent from Table V that the faculty were unwilling to continue the screening process.

A survey, by this writer, of the thirty five public health nurses presently serving the sixty four schools in the Winston Salem/Forsyth County School System revealed the following comments relating to failure of teachers to become involved in health screening.

1. "Many teachers seem to feel inadequate in judging defects. They feel it is something 'put off' on them by the public health nurse."
2. "Teachers say they are not capable. Some do a poor job when they do screen."
3. "Success of teacher screening is related directly to the importance the school principal places on health screening."
4. "Teachers refuse to see the need for screening. PTA personnel handle this in many schools."

5. "Teachers do not feel secure in evaluating children. Screening is not done accurately by many teachers."
6. "In some schools teachers rebelled so much against screening that nurses and students are used with minimal assistance from teachers."

It is noted that the principal also indicated she would not be willing to continue the screening process. It is felt by this writer that this attitude was the strongest deterrent to the effective implementation of the project. Administrators who do not accept health promotion and screening as a responsibility of the school fosters the developing of a passive resistance which can discourage even the most enthusiastic teacher in becoming involved in the health screening process.

It was also significant to evaluate the time spent by the public health nurse in the project school. Table VI illustrates the percentage of total nursing time spent in the school prior to the onset of the project and the time spent in school during the project. This is compared with the time public health nurses have spent in all schools over a four year period. The percentage of time spent at the project school (16%) was less than the total percent of nursing time spent in all schools (26.4%) despite the additional nursing activities and increased teacher participation which were initiated in the project school. The percentage of children obtaining needed health correction in the project school was 66% as compared to 39% in the overall school system. (See Table I on page 9)

Teachers who are involved with the screening process are more cognizant of children in their class who have a health problem. They are more likely to encourage the child and his/her parents to obtain care.



TABLE VI

Summary of the total amount of school time spent by public health nurses as compared to time spent in project school (1970-1975).

School Year	Total Enrollment	% of Total Nursing Time Spent in School	Enrollment of Project School	% of Time Spent in Project School
1970-71	49,677	22.3%	799	Data not available
1971-72	50,453	29.4%	501	Data not available
1972-73	44,766	23.4%	430	10%
1973-74	41,283	21.8%	399	12%
1974-75	44,750	26.4%	494	7.5% (prior to project Sept.-Dec., 1974) ----- 16% (during project Jan.-May, 1975)

In an analysis of Table VI it would appear that the amount of time the nurse spends in school related activities does not necessarily correlate with what can and should be accomplished. The effective organization of school health services in the project school, along with greater participation of teachers, resulted in more and better nursing service, including a 27% increase in the number of health corrections obtained in the 1974-75 school year.

Much of the information gained during this developmental research project is being utilized in attempting to better meet the health needs of the school child. For example, as a result of the problems identified in the project school, the following school health activities and changes have been implemented in the Winston Salem/Forsyth County School System.

1. During the week of June 16-20, 1975 a workshop was conducted for approximately two hundred and fifty teachers, primarily to assist them in recognizing students in their classroom with health problems which would inhibit their learning potential. This workshop was sponsored by the Area Health Education Center (Northwest Region), Bowman Gray School of Medicine, the Forsyth County Health Department, and the Winston Salem/Forsyth County School System.\* Teachers who attended this workshop assisted public health nurses in planning mini-workshops which were held in the elementary schools last fall.

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\*Appendix XV is a copy of the program which depicts health topics covered in this workshop.

2. During the 1975-76 school year health room assistants were hired in all elementary schools. These para-professionals were trained to assist with first aid and minor screening procedures. This allowed the public health nurse to spend more time identifying and following-up more serious health problems as well as in the area of health education.
3. The generalized public health nursing program is now being changed to allow public health nurses to specialize in their areas of interest whether it be school health, the visiting nurse service, or a clinical speciality. Even though fewer nurses are assigned to provide school health services it allows school health to be placed on a higher priority of service.

Effective organization of school health services requires intelligent action. There is a need for services dealing with (a) health appraisal (including teacher observation, hearing and vision screening, medical and dental examinations, and identification of mental health problems), (b) health counseling and follow-up relating to all types of health problems, (c) school sanitation, (d) communicable disease control, (e) emergency care of injury and sickness, and (f) health education. Procedures related to each of these areas have been presented in previous chapters. Application of these procedures in a particular school or school system is facilitated by efficient administration.

## CONCLUSION

There can be no greater obstacle to a first-class school health program than an administration who places a low priority on health and one that does not understand the contribution of the school to child health. It is essential to have a close formal working arrangement for consultation and the monitoring of therapy between educators and health professionals. Neither will function well in isolation.

"If health and not just a limited view of functional adequacy in the school setting is to be the goal of school health, then screening programs focusing on vision and hearing must give way to multiphasic screening programs which include developmental and psychological screening."<sup>35</sup>

To have one person in charge of school health is sound educationally and administratively. Since such an individual was hired by the Winston Salem/Forsyth County School System in the 1974-75 school year, more administrative support will be provided in the development of an overall school health policy and program.

The public health nurse must also assume greater responsibility for communication and in sharing her expertise with other teams within the school and community. In reviewing the literature it is discouraging to note how very few articles have been written by the practicing school nurse.

Public health nurses must learn to increase their effectiveness in the area of assisting teachers in planning and evaluating health education materials and serve as a consultant in health instruction.



She must also learn to keep adequate school records. Teacher-nurse school records provide a rich source from which to obtain data for the purpose of identifying factors which influence the status of health. Causes of accidents, reasons for absenteeism and reasons for visits to the nurse's office, including teacher referrals, are important considerations in planning action and direction.

The public health nurse should also familiarize herself with current legislative proposals as well as involve herself in promoting desirable health legislation.

A program of continuing education or inservice education is also essential for teachers and nurses to allow them to keep abreast of developments in science, health and education, as well as social and economic trends.

In order to avoid having to set priorities which may be detrimental to the school health program, specialization of public health nursing functions should be considered. One of the "principles" of administration concedes that "administrative efficiency is increased by a specialization of the task among the group."<sup>36</sup>

An example which points out the necessity of specialization can be found among physicians. The enormous complexity of medical science has given rise to great specialization through which the physician limits his work to certain parts of the body, special age groups, or to the application of special techniques. Today over one half of American physicians are specialists. Nursing has also grown more complex. Greater job satisfaction and a higher quality of nursing service may be realized through specialization.

More attention should be placed on the follow-up of children identified as having health defects. Efforts should be made to overcome problems which prevent the child from obtaining the necessary correction. For example inadequate transportation to the health care facility, lack of information relating to available resources, and cultural patterns which place a low priority on preventive health care and practices must be dealt with realistically.

It is only through continued assessment, evaluation and genuine concern that the public health nurse will fulfill her role to children and youth as well as contribute effectively to the process of health education.

APPENDIX I

STATE BOARD OF EDUCATION

POLICIES AND REGULATIONS

FOR

INSTRUCTIONAL PERSONNEL IN THE AREAS OF

PSYCHOLOGICAL AND GUIDANCE COUNSELING, HEALTH AND SOCIAL SERVICES

ADOPTED June 6, 1974

Chapter 1190, Senate Bill 977 (Appropriations for Current Operations).

"Funds appropriated in Section 2 to the State Department of Public Education for instructional personnel in the areas of psychological and guidance counseling, health and social services, reading, mathematics and cultural arts shall be allocated to local administrative units on the basis of average daily membership. The State Board of Education shall require local administrative units to provide evidence that the expenditure of local funds for the payment of such instructional personnel is no less than the amount expended per pupil in average daily membership for such purposes during the prior year. At the discretion of the State Board of Education, funds appropriated under this act may be withheld to ensure that supplanting of local funds does not occur. The State Board of Education is empowered to waive this requirement upon a showing of fact by the local administrative unit that compliance would result in inefficient use of funds and that the overall per pupil expenditure from local funds for instructional purposes is no less than the overall per pupil expenditure from local funds for instructional purposes in the preceding fiscal year." (Emphasis added -- appropriations referred to in Section 2 above are the total appropriations for this purpose).

- I. The Controller shall allocate to each administrative unit an amount of \$5.00 per student in average daily membership for the best continuous 6 of the first 7 months of the 1973-74 school year for grades 1 through 12.
- II. The allotments made include all funds for this purpose, including salaries and all fringe benefits on State standards (employer's cost of retirement, social security, hospitalization, disability insurance or any other fringe benefits).

- III. At the end of the current fiscal year each local board of education shall provide evidence in writing to the Controller of the amount of local funds expended for the payment of instructional personnel in the areas mentioned in the quotation from the law set out above. This evidence shall include the expenditure per pupil in average daily membership in the administrative unit for the instructional personnel in the areas of psychological and guidance counseling, health and social services, reading, mathematics and cultural arts. Such evidence shall include assurance that the amount expended per pupil in the administrative unit will not be less in the succeeding year for instructional personnel in the areas mentioned.
- IV. The State Board of Education may waive the prohibition for supplanting of local funds upon a showing of fact by the local administrative unit that compliance would result in inefficient use of funds and that the overall per pupil expenditure from local funds for instructional purposes is no less than the overall per pupil expenditure from local funds for instructional purposes in the preceding fiscal year.
- V. The funds allocated for this purpose shall be used by the local administrative units for the employment of instructional support personnel in guidance, psychological, health services, and social services. These funds may also be used for contracted services in these areas. Funds allocated for this purpose may not be used to supplement funds allocated separately for attendance counselors. Paraprofessionals and aides may be employed to assist with pupil personnel services within the individual school and/or school system.
- VI. Guidance counselors, psychologists and social workers employed from newly appropriated funds shall qualify to meet existing state certification standards.
- VII. Guidance counselors, psychologists and social workers shall be paid commensurate with the salary schedule for teachers in accordance with their educational training and experience.
- VIII. School nurses shall qualify to meet standards for licensure as set forth by the N. C. Board of Nursing. Other health personnel shall meet appropriate licensing standards.
- IX. School nurses and other health personnel shall be paid in accordance with the salary schedule(s) as set forth by the State Personnel Act.
- X. Determination for employing additional personnel shall be made by assessing the existing pupil personnel services program in grades K-12 with the focus toward building a comprehensive human support services team.



- XI. School Administrative Units should employ pupil personnel services workers to serve students in grades K-12. The following worker-student ratio is recommended:

Guidance Counseling	1 to 500
Social Workers	1 to 1,000
Psychologists	1 to 2,500
Health Services	1 to 2,000

- XII. Personnel employed and paid from these funds shall devote the time for which they are employed and paid in one or more of the areas for which these funds are appropriated and allotted.
- XIII. Two or more School Administrative Units may combine their allotments for jointly employing pupil personnel services personnel.

## APPENDIX II

### RESPONSIBILITIES OF THE PUBLIC HEALTH NURSE IN THE SCHOOL HEALTH PROGRAM

The following outline is the established role of the public health nurse in her assigned school. The degree of implementation and success of each individual school health program will depend upon the ability of the school to recognize the role of the nurse and to utilize her properly, as well as the nurses' professional capacity and desire to have a good school health program.

#### I. Teacher-Nurse Workshop

##### A. When

1. Should be held early in school year (preferably September).
2. All teachers and principal should be present.
3. Conference should be arranged by nurse and principal. School social worker may also wish to attend.

##### B. Purpose

1. Explain state laws regarding screening and observation responsibilities of teachers. A definite date should be set for teachers to complete screening, in order for re-screening to be done in time for adequate follow-up.
2. Inform teachers and principal of nurses' scheduled days to visit school. Each school should receive two visits per week at a specifically designated time.
3. Arrange for a referral method and procedure for follow-up of health defects. Teachers should place all returned correction letters in nurses' box. Teachers should let the nurse know when corrections have been obtained in order to prevent unnecessary home visits.

4. Assist school personnel in developing a plan for handling sudden illnesses or accidents.
5. Clarify the role of the nurse in the school.
6. Advise the faculty regarding communicable diseases; including learning to recognize those most commonly seen among school children, and how to manage same.
7. Advise faculty regarding immunization laws. It is the responsibility of the principal to exclude children with incomplete immunizations. The nurse is responsible for contacting and advising parents of any immunization their child may need and where vaccine is available.
8. The nurse should explain to faculty and principal the routinely scheduled procedures which are done each year; including kindertarten and first grade physical examinations, audiometric and telebinocular testing.
9. A report should be given of the proceeding year's screening results. (Number of children referred and corrections obtained, number of children having had communicable diseases, number of children not immunized and number of children still requiring follow-up.)
10. Discuss appropriate health screening techniques. Nurses may wish to personally assist new teachers with screening the first time.

## II. Health Education

- A. Nurses may be used as consultants by teachers whose courses deal with health. They may make a classroom visit to discuss anything from obesity to sex education.
- B. The following is a list of some of the health education activities which may involve the school nurse.
  1. Assist with PTA programs.
  2. Classroom presentations (teachers may request talks, films, or literature).
  3. Conferences with individual students regarding a specific health problem.
  4. Teaching families in the home.

### III. Screening

#### A. Responsibilities of teachers

1. Make sure every school child is screened yearly for health defects. Screening should include a check for height, weight, vision, dental caries, orthopedic problems, enlarged tonsils, hearing problems, emotional problems, and communicable diseases.
2. Teachers should be aware of resources available such as orthopedic and immunization clinics, school health funds and other community resources.
3. Teachers should know the reason for early screening and referrals. (Nurse will be able to follow up on defects early in the school year and will be able to offer more resources).
4. Teachers should be responsible for seeing that each child has a health record.

#### B. Responsibilities of the nurse

1. The nurse rescreens all children referred and makes appropriate referrals and recommendations to parents by letter and/or home visit.
2. The nurse is responsible for keeping each child's health record up to date.
3. The nurse assists families in use of community resources in securing correction of health defects when necessary.

### IV. Home Visiting

- A. The nurse may visit in the home if a child has been absent three days or more with an unexplained illness.
- B. A child may be transported by the nurse from school to his home only when it is felt that parents need additional assistance in getting the health problem corrected. An example of this would be the nurse doing health teaching in helping control a communicable disease.
- C. Nurses may visit to do follow-up of health defects when parents do not respond to a referral letter.
- D. A nurse may visit the home if a child has a positive tuberculin test or audiometric testing reveals a hearing problem.



- E. A home visit may be necessary to obtain permission for physical examinations or tuberculin skin testing when there has been no response to request letter.
- F. Home visits are made when it is necessary to assist the family in use of community resources.
- G. A home visit will be made at the request of the family.

#### V. Audiometric Testing

- A. Nurses will be responsible for co-ordinating the audiometric testing program, making appropriate referrals, and assisting with follow up on children with hearing defects.
- B. Grade levels to be tested will depend upon the advice of the Forsyth County Pediatric Medical Society and other medical consultants in the community.
- C. The nurse will screen all special referrals.

#### VI. Pre-School Clinics

- A. Purpose of involving the nurse
  - 1. Explain to parents the role of the nurse in school.
  - 2. Inform parents of health requirements a child needs to meet in order to enter first grade or kindergarten.
  - 3. Reinforce health education.
- B. The nurse may participate in planned program as well as assist by checking health records.

#### VII. Telebinocular Testing

- A. All children referred by teachers with a possible visual defect will be re-screened by the nurse using the telebinocular visual testing equipment.
- B. Mass testing of certain grade levels on the telebinocular will depend upon the amount of nursing time available and the recommendations made by the Forsyth County Ophthalmology Society.

### APPENDIX III

#### PROJECT S.H.I.N.E. PRE-EVALUATION FORM

1. The Public School Laws of North Carolina make "screening and observation of students" a legal responsibility of teachers of grades 1-12. Do you feel you need assistance in learning to identify students with health problems?  
  
YES \_\_\_\_\_ NO \_\_\_\_\_
2. Would you be willing to participate in an informal student health inspection program monthly for the remainder of this school year with the assistance of the public health nurse?  
  
YES \_\_\_\_\_ NO \_\_\_\_\_
3. Would you like to know more about immunizations required by N. C. State law and school attendance rules?  
  
YES \_\_\_\_\_ NO \_\_\_\_\_
4. Do you feel you need more information regarding the most common communicable diseases among school age children?  
  
YES \_\_\_\_\_ NO \_\_\_\_\_
5. Would you like to utilize the public health nurse more in classroom presentations relating to healthful living?  
  
YES \_\_\_\_\_ NO \_\_\_\_\_
6. Do you see a need for a revision of the student health record?  
  
YES \_\_\_\_\_ NO \_\_\_\_\_
7. Do your students question rules and regulations relating to environmental control, such as not being able to walk behind the cafeteria kitchen counter?  
  
YES \_\_\_\_\_ NO \_\_\_\_\_
8. Would you like to know more about food handling regulations?  
  
YES \_\_\_\_\_ NO \_\_\_\_\_

9. Do you see infractions of good health practices, such as a student eating off of another student's plate?

YES \_\_\_\_\_ NO \_\_\_\_\_

10. Are your students aware of and interested in clean-up procedures inside and outside the school building in the interest of a safer environment?

YES \_\_\_\_\_ NO \_\_\_\_\_

11. Are your students aware of the health dangers associated with rats, mice, and roaches?

YES \_\_\_\_\_ NO \_\_\_\_\_

12. Do you know what causes dental decay?

YES \_\_\_\_\_ NO \_\_\_\_\_

13. Do you teach a unit on dental health in your class?

YES \_\_\_\_\_ NO \_\_\_\_\_

14. Do you know what plaque is?

YES \_\_\_\_\_ NO \_\_\_\_\_

15. Do you know what is the leading cause of loss of teeth in children?

YES \_\_\_\_\_ NO \_\_\_\_\_

COMMENTS OR SUGGESTIONS:

## TEACHER WORKSHEET FOR SCHOOL HEALTH SERVICES

Teacher \_\_\_\_\_ Grade \_\_\_\_\_ Enrollment \_\_\_\_\_ Date \_\_\_\_\_ Nurse \_\_\_\_\_

[illegible]

**Other Referrals:**



BEHAVIOR

1. Withdrawn
2. Cries easily
3. Bites nails
4. Sucks thumb
5. Restless
6. Excessive use of toilet
7. Stutters or other speech defect
8. Hostile

EARS

1. Earaches
2. Difficulty in hearing

EYES

1. Styes
2. Inflammation
3. Crossed eyes
4. Complaint of poor vision
5. Headache
6. Wears glasses
7. Squints

HEALTH PRACTICES

1. Evidence of poor sleeping and eating habits
2. Inability to put health knowledge into practice
3. Stomach ache - chronic complainer
4. Underweight
5. Overweight

ORTHOPEDIC

1. Poor posture
2. Limp
3. Toes pointed in or out
4. Stiff or swollen joints
5. Leg pain
6. Use of braces, crutches, or corrective shoes

PROGRESS IN SCHOOL

1. Marked change in scholastic achievement
2. Drop in interest and grades without apparent explanation

RESPIRATORY

1. Frequent colds
2. Wheezing
3. Sore throat
4. Chronic cough
5. Nasal discharge

SCHOOL ATTENDANCE

1. Frequent absences
2. Absent 5 or more consecutive days
3. Hospitalized
4. Transferred to another school

SKIN AND SCALP

1. Sores
2. Scaling patches
3. Itching
4. Rash
5. Poor personal hygiene
6. Unexplained abrasions or injuries

TEETH

1. Toothaches
2. Obvious abnormalities
3. Poor oral hygiene

# APPENDIX V

## CONTAGIOUS DISEASES

DISEASE	INCUBATION PERIOD	SYMPTOMS	SIGNS	RETURN TO SCHOOL
Chickenpox	14-21 days	Malaise and fever for 12-24 hours	Water blisters in mouth, throat and over skin. Blisters appear in crops of 3.	On recovery and when crusts have formed. At least 7 days after onset.
Diphtheria	2-5 days	Fever, Sore throat	Grayish membrane on throat and tonsils.	On recovery after 3 negative throat cultures.
German Measles	14-21 days	Mild fever, sore	Pink, flat rash, fades by third day.	After fever subsides. Infectivity 3-5 days after onset of symptoms.
Impetigo	Variable and indefinite	Usually no fever, but local reaction at site of sores on skin.	Sores with pus-filled blisters. May be covered with crust.	When sores are healed.
Infectious Hepatitis	10-40 days	Fever, nausea, stomach pain.	Jaundice usually	On clinical recovery. Varies from 10-21 days after onset.
Measles	10-12 days	Fever, cough, cold, conjunctivitis.	Skin eruption reddish, flat, involves trunk, face and extremities.	On recovery - usually 5 days after appearance of rash. Lasts 5 days.

DISEASE	INCUBATION PERIOD	SYMPTOMS	RETURN TO SCHOOL	
			SIGNS	SCHOOL
Mumps	12-26 days	Fever, swelling and tenderness of salivary gland.	Swelling of one or more salivary or parotid glands in front of and below ear.	When swelling disappears.
Pediculosis (Head Lice)	1-2 weeks	Irritation and itching of scalp.	Light gray insects, white nits in hair. Tiny bite marks on neck and scalp.	When nits and insects have been destroyed in hair and clothing.
Pink-Eye	1-3 days	Eye is irritated, excessive tearing. Sensitive to light.	Muco-purulent exudate from eye.	Upon medical permission.
Ringworm	10-14 days	Itching	Bald areas on scalp. Ring-shaped sores over skin. "Athlete's Foot."	When treatment is started.
Scabies	Several days or weeks before itching is noticed	Itching	Tiny bite marks on shoulders, around waist linear scratch marks.	Until mites and eggs are destroyed by treatment. 1 or 2 treatments required.
Scarlet Fever	2-7 days	Fever, sore throat, vomiting.	Fine, red rash over trunk and extremities.	Upon recovery and when free of purulent discharges. Probably 7 days after onset.
Whooping Cough	7-21 days	Insidious onset with violent coughing spells becoming paroxysmal and end in crowing sound.	Paroxysmal cough ending in inspiratory whoop.	Approximately 3 weeks after illness begins.

## APPENDIX VI

### TYPES OF NEGLIGENCE

School personnel are expected to render first aid to injured or sick pupils. According to Anderson if assistance given to a pupil may be inherently dangerous to the health of the pupil there are legal risks. An act may be negligent in any of the following circumstances.

1. It is not properly done; appropriate care is not used.
2. The circumstances under which it is done creates risks, although it is done with due care and precaution.
3. An individual may be indulging in acts which involve an unreasonable risk of direct and immediate harm to others.
4. An individual sets in motion a force, the continuous operation of which may be unreasonably hazardous to others.
5. He creates a situation which is unreasonably dangerous to others because of the likelihood of the action of third persons or inanimate forces.
6. He entrusts dangerous devices or instruments to persons incompetent to use or care for them properly.
7. He neglects a duty of control over third persons who, by reason of some incapacity or abnormality, he knows to be likely to inflict intended harm upon others.
8. He fails to employ due care to give adequate warning.
9. He fails to exercise the proper care in looking out for persons whom he has reason to believe may be in the danger zone.
10. He fails to employ appropriate skill to perform acts undertaken.
11. He fails to make adequate preparation to avoid harm to others before entering upon certain conduct where such preparation is reasonably necessary.



12. He fails to inspect and repair instrumentalities or mechanical devices used by others.
13. His conduct prevents a third person from assisting persons imperiled through no fault of his own.<sup>37</sup>

## APPENDIX VII

### PROPOSED PLAN FOR EMERGENCY CARE

Every school should have a written plan to take care of major illness, minor illness, and emergencies following accidents.

#### I. Facilities For Emergency Care

##### A. Health Room

##### 1. Location

- a. Easily accessible
- b. Good light and ventilation (free as possible from dust and dust gathering objects)
- c. Free from activity (away from workroom)
- d. Should be able to partially darken room
- e. Health cards should be kept in locked filing cabinet, readily accessible to public health nurse working in health room.

##### 2. Equipment

- a. Two cots
- b. At least 4 sheets
- c. Paper cover for cots
- d. Scales
- e. Measuring rod
- f. Eye chart
- g. Audiometer and telebinocular (be able to lock up)
- h. Table - Desk
- i. 2 chairs
- j. Cabinet for supplies
- k. Wash basin (or portable sink) - soap

##### 3. First Aid Supplies and How to Use Them (Post in Health Room)

- a. Adhesive tape - for fastening dressings ( $\frac{1}{2}$  inch and 1 inch size)
- b. Alcohol - disinfecting skin - minor wounds
- c. Aromatic Spirits of Ammonia - as inhalant on piece of absorbent cotton for fainting
- d. Band Aids
- e. Board which could be used as a splint (could have different sizes)
- f. Cotton (store in glass jars) - use to make applicators, swabs and pledgets for applying medication or wiping wounds. NEVER USE FOR DRESSING OPEN WOUNDS AND BURNS.
- g. Eye irrigation solution (Boric Acid)
- h. Ice bag
- i. Mediquick - use as antiseptic on cuts and scratches (avoid spraying near eyes)
- j. Methiolate - disinfecting wounds. Be very careful to protect eyes if used on face wounds.
- k. Neosporin Ointment (See Instructions For Treating Impetigo)  
Do not use any type ointment near eyes. Never remove ointment from jars with fingers (use tongue blade or applicator). Never put medication back in jar after using on wound.

- l. Oral thermometer (should have at least 4) - always rinse with cold running water before using. Clean thoroughly with cotton moistened with Septisol Soap and Rinse With Cold Running Water after use. Soak at least 30 minutes before using again in Alcohol and Iodine Solution.
- m. Paper bags - to dispose of soiled bandages, etc.
- n. Peroxide - for cleaning infections and old sores.
- o. Roller Bandage - for protecting small injuries or holding dressings (recommend 1 inch or 2 inch size)
- p. Safety pins
- q. Scissors - bandage or blunt
- r. Septisol - washing around injuries, cleaning thermometers, scrubbing hands before and after cleansing wounds or checking an ill child.
- s. Sterile gauze - for protecting injuries (recommended size 4" x 4" and 2" x 2")
- t. Tongue blades and applicators - for applying medication (throat and teeth inspection)
- u. Topical toothache drops
- v. Tourniquet
- w. Ungentine - for burns
- x. Vaseline or Petroleum Jelly - for chafing or minor irritations
- y. Zinc Oxide - for eczema or minor infections
4. First Aid Kit For Each Teacher Includes:
  - a. Band Aids
  - b. Septisol
  - c. Methiolate
  - d. Applicators
  - e. Cotton balls
  - f. Alcohol

## II. Personnel Assignments For Emergency Care

- A. Person First In Command And Duties
- B. Person Second In Command
- C. Person Third In Command
- D. Person To Phone (Numbers Posted At All Phones)
  1. Ambulance
  2. Emergency Room
  3. Fire Department
  4. Health Department
- E. At Least Two People On Every School Staff Should Have First Aid Training

## III. Information And Authorization Form Needed On Every Student (Readily Available)

Example:

Authorization Form To Use In Case Of Accident Or Illness

Name of Student \_\_\_\_\_ Name of Physician \_\_\_\_\_

Address \_\_\_\_\_

Special Health Problems (check) (a) Allergies \_\_\_\_\_ (b) Diabetes \_\_\_\_\_

(c) Emotional \_\_\_\_\_ (d) Epilepsy \_\_\_\_\_ (e) Hearing loss \_\_\_\_\_

(f) Medications taken routinely \_\_\_\_\_ (g) Orthopedic (braces, etc.) \_\_\_\_\_

(h) Visual \_\_\_\_\_ Other: \_\_\_\_\_

I hereby authorize the school staff at \_\_\_\_\_  
(name of school)  
to take my child to a physician or hospital for treatment in case of  
emergency (if unable to contact parent or guardian).

\_\_\_\_\_  
Signature - Parent or Legal Guardian



## APPENDIX VIII

### HEALTH EDUCATION

The nurse assists with all types of school health problems, and is a health educator of either individuals or groups. She serves as a family health counselor and deals with problems of family health protection, including help to the expectant mother, care of babies and young children, and care of those ill with acute or chronic diseases.

For teachers who wish to make use of films and literature available through the health department and would like to utilize the nurse in areas of health education the following is a list of suggested topics in areas in which we have available information and could offer assistance.

1. Physical and Emotional Health
2. Diet Control
3. Care of the Skin
4. Accident Prevention
5. Smoking and Health
6. Drug Addiction
7. Alcoholism
8. Quackery - Health Fads
9. Communicable Diseases
10. Chronic Diseases
11. Child Care
12. Health Careers
13. Health resources in community, including health department
14. Dental Care
15. Personal Hygiene
16. Nutrition
17. Environmental Health
18. Safety
19. Prevention of Disease
20. Care of the Ill

APPENDIX IX

TEACHER EVALUATION OF HEALTH EDUCATION PACKETS

Forsyth County Health Department  
P. O. Box 2975  
Winston Salem, N. C. 27102

May 1, 1975

South Fork School  
Winston Salem/Forsyth County Schools  
Winston Salem, North Carolina

Dear

In January of this year the Forsyth County Health Education Council sent a packet of health education materials to you for possible use in health classes. The purpose of this project was to assist teachers in better utilization of various community health services available to them.

The Council would greatly appreciate your evaluation of the usefulness of this material to the classroom teacher. Please complete the following questionnaire and return to the public health nurse assigned to your school.

Thank you for your co-operation.

Sincerely,

Betty Griffith, R. N., Chairman  
Forsyth County Health Education Council

ENC.

1. Were the materials of any value to you?

YES 15 NO 2 NO RESPONSE 1

2. If so, how? (Check all that apply)

Classroom presentations	<u>14</u>	Student Participation	<u>5</u>
Personal Information	<u>9</u>	Resource Speakers	<u>3</u>
Bulletin Boards	<u>11</u>	Other (please specify)	<u>0</u>

3. Which of the agency materials did you find most valuable? (check)

Air Pollution	<u>3</u>	Dairy Council	<u>11</u>	Mental Health	<u>1</u>
Alcoholism	<u>0</u>	Health Dept.	<u>7</u>	N. C. Lung Ass.	<u>0</u>
Cancer Service	<u>0</u>	March of Dimes	<u>0</u>	Red Cross	<u>10</u>

4. Why did you choose materials from these agencies?

- a. Related more closely to interest of students
- b. More suitable to grade level being taught
- c. Tied in more closely with unit being taught

5. Do you see this material as being helpful to all teachers at all grade levels?

YES 12 NO 2 UNCERTAIN 1

6. Do you see the material as being helpful only to teachers teaching classes in health?

YES \_\_\_\_\_ NO 11 NO RESPONSE 7

COMMENTS OR SUGGESTIONS:

## APPENDIX X

### EVALUATION OF DRUG EDUCATION TRANSPARENCIES

#### MEMORANDUM

TO: Pansy Whicker, School Health Specialist  
FROM: Betty Griffith, R. N.  
DATE: April 4, 1975  
RE: Drug Education Transparencies

The Instruction Guide for the Drugs and You Series (Kindergarten through grade two) was reviewed by:

1. Betty Griffith, R. N.
2. Robert Charlton, Health Educator
3. Charles Ingold, Environmental Engineer

Purpose: To determine the appropriateness, accuracy, and relevance of the material for students in kindergarten through grade two.

Most of the material was factual and some of the suggested learning activities were excellent. The following comments reflect what the committee saw as discrepancies and misleading information which would not provide children with a foundation upon which to build knowledge about drugs.

1. A great deal of the material is left to the teacher's discretion. Elementary teachers may need additional knowledge and background about the effect of specific drugs before attempting to teach the course.

#### 2. TRANSPARENCY 1

Medications and poisons are both described as chemicals. This may be confusing to the child to place in the same context without a great deal of clarification from the teacher.

#### 3. TRANSPARENCY 2

The statement "Large enough quantities would cause death."  
(Teacher may be limited in knowing safe dosages of many drugs. Also, this may lead child to feel that "a small amount is okay." )



4. TRANSPARENCY 3

The statement "Children should never put household chemicals in their mouth..." (Should state that children should never handle household chemicals as well since skin burns may result as well as internal poisoning).

5. TRANSPARENCY 3

The statement "It is okay to take drugs from the baby sitter...." (Older students sometimes give drugs to younger students. This statement should be qualified as being only with parental instruction).

6. TRANSPARENCY 5

Many potentially lethal substances (hair spray, deodorant etc.) are not discussed as being harmful or poisonous. This series was published in 1971. A number of deaths have occurred from inhaling glue, deodorant and other substances in the past two years.

7. TRANSPARENCY 5

The demonstration of "How to inject drugs..." may encourage child to experiment to find out for himself.

8. TRANSPARENCY 6

The statement "Taking medicine to stay well..." is a poor approach to preventive medicine. In most instances children do not need to take medicine to stay well.

9. TRANSPARENCY 8

(a) Example - "Patty feels sick at her stomach" Medication is given.

This is a poor example because stomach aches in children usually indicate a different kind of treatment needed rather than oral medication (could be suggestive of appendicitis, emotional reaction etc.).

(b) Example - "Daddy gives Kathy a spoonful of medicine for her sore throat. The medicine makes her throat feel better."  
(Throat will not feel better for a long period. Child would be led to expect immediate results).

10. TRANSPARENCY 9

The statement "Medicine can make you feel sleepy, calm, peppy..." (This is very suggestive and child may experiment to be able to experience these various sensations.

11. TRANSPARENCY 9

A suggested activity is for children to share experiences they have had with the effects of poisons and medicines. (Would child be tempted to experiment in order to have an experience to share?)

12. TRANSPARENCY 10

Children are encouraged to report any symptoms if they have taken any type of medication.

(Children should not wait till symptoms appear before reporting ingestion of any medication or other substance as suggested in transparency but should report this immediately.)

13. TRANSPARENCY 11

This transparency is familiarizing children with many forms of medications. (A differentiation should be made between medical and non-medical substances, both of which may be dangerous.)

14. TRANSPARENCY 17

The statement is made "Poisons are not medicines." This is not a true statement. Some medications do contain poisons. Also medications can be poisonous if taken in the wrong dosages.

15. TRANSPARENCY 17

Alcoholic beverages and cigarettes are equated with poisons. (Children may become confused when they see adults smoking or drinking and may feel that poisons will not cause immediate harm if taken internally.)

16. TRANSPARENCY 13

The statement is made that "The trash problem in a rural community is not bad." This is a false statement.

## APPENDIX XI

### LESSON PLANS DEVELOPED BY NUTRITIONIST

#### Nutrition Lesson Plan I: Need Iron - Eat It!

Developed by: Maggie Cramer, R.D., Forsyth County Nutritionist

Date: March 27, 1975

The object of this nutrition lesson is to introduce the teacher and children to the need for dietary iron and why the body needs iron. Some practical explanations will follow with an actual 24 hour dietary recall from each student noting his dietary iron and then, a tasting party using the Iron Cookie.

Materials for use and distribution include:

- 1) Need Iron-Eat It! (Pamphlet from Nutrition Section, N. C. Department of Human Resources)
- 2) Good Foods Coloring Book
- 3) Iron Cookie Recipe
- 4) Box of Cream of Wheat, Raisins
- 5) Comparison Cards (Forsyth Dairy Council)

The subject of dietary iron is most appropriate here in North Carolina and actually in many parts of the nation. It has been reported in the N. C. Nutrition Survey, Part II (December, 1974) that 7% of household dietaries were below one half of the standard. Other reported deficiencies were calcium, Vitamin C, Vitamin A, and protein. Among pre-school children, iron and Vitamin C levels were frequently below one half the survey standard. Without nutrition education, this characteristic is most likely carried over with the elementary school child. Thus, not only the homes but the schools is an excellent means for teaching nutrition education.

Nutrition Lesson Plan II: Food is Fun - A Tasting Party  
Developed by: Catherine Cochran, Assistant Food Manager, Winston Salem/  
Forsyth County Schools  
Date: April 7, 1975

INTRODUCTION: Eating food that is good for you can be fun. Eating new foods can be fun. Studying, preparing, watching food grow can be fun.

GOALS: Students will learn to enjoy eating all foods, and will enjoy studying about them.

PRE-TEST: (oral)

What is your favorite food?

What food do you dislike? Why?

Would you like to taste some new foods?

BEHAVIORAL OBJECTIVES:

1. To identify 5 vegetables by name.
2. To tell how these 5 vegetables grow (on vines, under ground, etc.).

SUPPLIES NEEDED:

Amount: enough for each child to see and taste. Use 3-5 vegetables whole, cut up raw, and cooked.

Disposable plates and forks for each child.

Source: Cafeteria Manager.

One seed for each child to plant.

One egg cup with soil for each child.

PREPARATION BEFORE CLASS:

Make poster of vegetables showing which ones grow above and which below the ground.

CLASS PRESENTATION:

1. Ask oral pre-test questions.
2. Show whole vegetable and ask students to identify. Discuss how it grows. Point out on poster.
3. Show cut up raw vegetables and let each child taste and give reactions.
4. Show cooked vegetable. Explain the difference between raw and cooked. Let each child taste cooked vegetable and give his reaction.
5. Let each child plant a seed. Keep in classroom and care for until time to plant at home.

POST-TEST:

1. Students will identify 5 vegetables by name.
2. Students will tell how these 5 vegetables grow.

FOLLOW-UP:

1. Students will tell parents about the tasting party and will ask parents to try a new food at home.
2. Students will transplant vegetable at home and care for it.



APPENDIX XII

LETTER TO PARENTS CLARIFYING PROJECT S.H.I.N.E.

HEALTH DEPARTMENT

FORSYTH COUNTY

March 03, 1975

BOARD OF HEALTH

R.L. Smith, M.D.

*Chairman*

Mary I. Griffith, M.D.

Ellen H. Haxton

Johnnye H. Hooper

John E. Lynch

J. Harry Spillman, D.D.S.

James A. Way, Jr.

Dear Parent:

South Fork School is presently involved in a special program with a focus on optimal development for every student. Project SHINE is a program designed to Seek Health Improvement Needed Ecologically. The various health resources available to the schools are being utilized by the teaching staff.

Several classes are involved with activities relating to good health and good health practices. Mrs. Chiddie's third grade class would like to do a special project in the area of good nutrition. The weight and height of each class member will be checked before and after the project. The class will discuss and plan well balanced meals and keep a record of individual dietary habits.

The nurse assigned to South Fork School, assisted by laboratory personnel from the Forsyth County Health Department, would like to check the hemoglobin (iron) level of each child, as a method of assisting students in learning more about iron rich foods. Please sign and return this letter to school if you are willing to have your child participate in the hemoglobin check.

A representative from the class as well as Mrs. Chiddie will appear on the WXII "Today Show" on May 12, 1975 to share some of the things the class has learned about good nutrition.

(Mrs.) Betty Griffith, R.N.  
Nursing Supervisor

*Betty Griffith, R.N.*

Date \_\_\_\_\_

I hereby give permission for \_\_\_\_\_ to have  
(student's name)  
a hemoglobin check at school by the Forsyth County Health Department on  
March 27, 1975.

\_\_\_\_\_  
(Signature of Parent)

### APPENDIX XIII

#### JUSTIFICATION SUBMITTED TO THE FORSYTH COUNTY BUDGET OFFICE REQUESTING AN AUDIOMETER AND TELEBINOCULAR FOR EVERY SCHOOL IN THE WINSTON SALEM/ FORSYTH COUNTY SCHOOL SYSTEM

Each year between 13,500 to 23,000 children in the sixty four public schools are tested for visual difficulties on the telebinocular testing equipment and approximately 5,000 to 8,500 children are given an audiometric screening test using the Belton Audiometer. All kindergarten and first grade students are screened on the telebinocular as well as all special referrals from kindergarten through grades twelve.

All kindergarten, grade one and grade three students, all children with known hearing loss, and all special referrals (kindergarten through grades twelve) are screened yearly with the audiometer. These health services are provided by thirty five public health nurses as part of the regular school health program.

At the present time the health department owns twelve telebinoculars and six audiometers. The department also has the use of three audiometers which belong to the school system.

Both these machines are quite delicate as well as being fairly large and difficult to carry. The audiometers must be calibrated twice each year. Carrying the audiometers from school to school in an automobile has a tendency to shake the machines and render them less accurate. The machines also tend to be damaged through constantly being used by many people and carried from school to school.

It is essential to complete screening procedures early in the school year in order to adequately follow-up on identified health defects. With the equipment not always being accessible when the public health nurse is free to screen and the school can provide the necessary space (the library or other quiet place must be used for audiometric testing and this space is not always available) many times screening is delayed until late in the school year.

In the 1973-74 school year 1,720 children were referred for correction of visual defects and 174 children were identified as having a hearing problem. Out of this number 927 children received an eye examination and 110 children received treatment for hearing loss.

It is felt the number of corrections would be significantly improved through the provision of an audiometer and telebinocular for each school. Leaving the machines stationary in each school would also mean less damage and equipment would need to be replaced less frequently.



APPENDIX XIV

TEACHER EVALUATION FORM

MEMORANDUM

To: Teaching Staff South Fork School

From: Betty Griffith, R.N.  
Jean Shuping, R.N.

Date: April 17, 1975

Re: Evaluation of Project SHINE

Thank you for your participation in Project SHINE. In order to assess the level of success achieved by our joint efforts in attempting to meet the many and varied health needs of school children it is essential that we have your input and evaluation of the program.

Please answer the following questions frankly and honestly. It is only through your observations and assistance that the "gaps" in health services can be narrowed.

Please help us serve you and your students better.

1. Do you feel a teacher-nurse workshop at the beginning of the school year is necessary in order to implement the school health program effectively?  
Yes \_\_\_\_\_ No \_\_\_\_\_
2. Which of the following do you feel should be included in a teacher-nurse workshop? Check all that apply.
  - a. Current immunization laws \_\_\_\_\_
  - b. Communicable disease control and school exclusion rules \_\_\_\_\_
  - c. Screening and observation techniques \_\_\_\_\_
  - d. Plan for handling emergencies \_\_\_\_\_
  - e. Clarification of nurse's role in school, including health education \_\_\_\_\_
  - f. Medical and other community resources available to students \_\_\_\_\_
  - g. Other (please specify) \_\_\_\_\_
3. Are there other areas that you would like assistance from the public health nurse as it relates to the health of school children? Yes \_\_\_\_\_ No \_\_\_\_\_  
Please explain \_\_\_\_\_
4. Do you feel the referral and follow-up procedure is adequate? Yes \_\_\_\_\_  
No \_\_\_\_\_  
If your answer is no what changes would you suggest? \_\_\_\_\_
5. Would you be willing to assume the responsibility of initially screening all the students in your classroom, including all the areas listed under "teacher observations" on the back of the green health card? Yes \_\_\_\_\_ No \_\_\_\_\_

6. Do you feel a series of workshops designed to strengthen "observational skills of teachers" would be helpful in learning to screen more efficiently?  
Yes \_\_\_\_\_ No \_\_\_\_\_
7. Do you feel the additional emphasis placed on health during Project SHINE has made you more aware of health problems among students in your class?  
Yes \_\_\_\_\_ No \_\_\_\_\_

8. What do you see as areas of weakness in Project SHINE? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Areas of strength? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

FOR YOUR INFORMATION

As a result of your screening efforts the following health problems were identified and corrected during this school year. An additional effort will be made during the summer to contact the parents of children still needing corrections or follow-up.

Screened and Referred by Teacher \_\_\_\_\_  
Screened by Public Health Nurse \_\_\_\_\_  
Referred by Public Health Nurse \_\_\_\_\_  
Obtained Correction \_\_\_\_\_

APPENDIX XV

FIRST ANNUAL WORKSHOP FOR TEACHERS

Bowman Gray School of Medicine

Memorandum

Date June 6, 1975

To: Program Participants, School Health Workshop

From: Michael R. Lawless, M. D., Pediatrics

Subject: School Health Workshop, June 16-19, 1975

Thank you for agreeing to participate in this first School Health Workshop. The willingness with which each participant responded indicates a shared feeling that this is an important effort toward developing a school health program that goes beyond routine physicals and immunizations.

The workshop participants will be recently appointed members of a three-member School Health Committee representing each school in Winston-Salem/Forsyth County. Participants are also invited from selected schools in the sixteen county Northwest Area Health Education Center region. The committee members will use the information from the workshop to conduct "mini-workshops" for all the faculty in their respective schools. These will be conducted in conjunction with the School Public Health Nurse early in the 1975-76 school year.

A major goal of the June Workshop is to provide information and identify resources to the Health Committee members. Their report to faculty with such information should increase recognition of the child requiring health-related services. The very occurrence of this workshop reflects a genuine interest in better meeting these needs of students.

Pansy Wicker, Health Program Specialist, or I, will try to respond to any questions that arise concerning the program in general or your individual responsibilities. Our sincere thanks for your participation.

/sc

HELPING STUDENTS DEVELOP AND MAINTAIN THEIR HEALTH

A WORKSHOP FOR TEACHERS

Monday through Thursday Mornings  
June 16 - 19, 1975

8:30 A.M. - 12:30 P.M.

JEFFERSON JUNIOR HIGH SCHOOL

Sally Kirk Road  
Winston Salem, North Carolina

A WORKSHOP FOR TEACHERS WILL BE CONDUCTED BY THE WINSTON SALEM FORSYTH COUNTY PUBLIC SCHOOL SYSTEM IN COOPERATION WITH THE FORSYTH COUNTY HEALTH DEPARTMENT, THE DEPARTMENT OF PEDIATRICS AND THE NORTHWEST AREA HEALTH EDUCATION CENTER OF BOWMAN GRAY SCHOOL OF MEDICINE ON SELECTED HEALTH TOPICS AND THE ROLE AND RESPONSIBILITIES IN PRIMARY (PREVENTIVE) AND SECONDARY (REFERRAL) INTERVENTION BY THE PUBLIC SCHOOL TEACHER.

- I. "EARLY DISCOVERY OF HEALTH PROBLEMS MAY PREVENT DISEASE OR DYSFUNCTION"
- II. "DIFFERENCES IN MANAGEMENT OF HEALTH PROBLEMS IN VARIOUS AGE GROUPS"
- III. "DENTAL HEALTH FOR A LIFETIME"
- IV. "THE HYPERACTIVE STUDENT AND RESOURCES AVAILABLE TO HELP"
- V. "THE DOLLARS AND SENSE OF DENTAL HEALTH"
- IV. "EFFECTS OF SPEECH, HEARING AND/OR VISION PROBLEMS ON GROWTH AND DEVELOPMENT"

Speakers for the above topics will be from the Department of Pediatrics, and Department of Community Medicine, Bowman Gray School of Medicine, and from practitioners in the community. Each topic will provide for small group discussions.



## FOOT NOTES

<sup>1</sup>Russell B. Long, Chairman, Report of the Committee on Finance Relating to the Social Security Act (Washington, D. C.: Government Printing Office, 1975), p. 531.

<sup>2</sup>Peggy Chinn, R. N., Ph. D., "A Relationship Between Health and School Problems: A Nursing Assessment," The Journal of School Health, XLIII (February, 1973), p. 85.

<sup>3</sup>Ibid., p. 85.

<sup>4</sup>N. G. Hawkins, "Is There A School Nurse Role?," American Journal of Nursing (March, 1971), pp. 744-751.

<sup>5</sup>Chinn, The Journal of School Health, p. 86.

<sup>6</sup>Alma Nemir, M.D., The School Health Program (Philadelphia, London: W. B. Saunders Company, 1965), pp. 225-226.

<sup>7</sup>Ibid., pp. 227-232.

<sup>8</sup>American School Health Association, Guidelines For The School Nurse In The School Health Program (Kent, Ohio: American School Health Association, 1974), p. 1.

<sup>9</sup>Ruth Grout, M.P.H., Ph. D., Health Teaching In School (Philadelphia, London: W. B. Saunders Company, 1968), p. 28.

<sup>10</sup>Long, Report of the Committee on Finance Relating to the Social Security Act, p. 537.

<sup>11</sup>Daniel M. Wilner, Rosabella P. Walkey, and Lener S. Goerke, Introduction To Public Health (New York: MacMillan Publishing Company, 1973), p. 385.

<sup>12</sup>Betty Hines, School Principal, personal interview held in Winston-Salem, North Carolina, January, 1975.

- <sup>13</sup> Milton J. Lesnik and Bernice Anderson, R. N., Ed. D., Nursing Practice and the Law (Philadelphia, Montreal: J. P. Lippincott Company, 1955), p. 343.
- <sup>14</sup> International City Managers' Association, Administration of Community Health Services (Chicago, Illinois: The International City Managers' Association, 1961), pp. 316-317.
- <sup>15</sup> Roger F. Aubrey, M.A., "Health Education: Neglected Child of the School," The Journal of School Health, XLII (May, 1972), p. 121.
- <sup>16</sup> C. L. Anderson, Dr. P. H., School Health Practice (Saint Louis: The C. V. Mosby Company, 1972), p. 12.
- <sup>17</sup> State Board of Education, Public School Laws of North Carolina (Charlottesville, Virginia: The Mickel Company, 1971), p. 152.
- <sup>18</sup> Charles C. Wilson, M.D., Editor, School Health Services (National Education Association and the American Medical Association, 1964), p. 114.
- <sup>19</sup> William Ferinden, Ph. D., "The Role of the School Nurse in the Identification of Potential Learning Disabilities," The Journal of School Health, XLII (February, 1972), p. 86.
- <sup>20</sup> Ibid., p. 84.
- <sup>21</sup> North Carolina State Board of Health, Immunization Survey of Two Year Old Children, (Immunization Program: Division of Epidemiology, December, 1973), p. 14.
- <sup>22</sup> Walter Joyce, School Principal, personal interview held in Winston Salem, North Carolina, February, 1975.
- <sup>23</sup> Alran S. Benenson, Control of Communicable Diseases In Man (The American Public Health Association, 1970) pp. 90, 117, 148, 223.

<sup>24</sup>Henry Johnson, M. D., for the Forsyth County Pediatric Society, "Health Care For Our Public Schools," (Winston Salem/Forsyth County, 1975) (Mimeographed) p. 2.

<sup>25</sup>Anderson, School Health Practice, p. 175.

<sup>26</sup>Ibid., p. 177.

<sup>27</sup>Doug Punger, School Attorney, personal interview held in Winston Salem, North Carolina, February, 1975.

<sup>28</sup>Ibid.

<sup>29</sup>Anderson, School Health Practice, p. 29.

<sup>30</sup>Forsyth County Health Department Annual Report (Winston Salem/Forsyth County, 1972-73), p. 15.

<sup>31</sup>Aubrey, The Journal of School Health, pp. 285-286.

<sup>32</sup>Ibid. , p. 288.

<sup>33</sup>Betty Pikula and Robert Shuping, Private interview held in Winston Salem, North Carolina, April, 1975.

<sup>34</sup>Chinn, The Journal of School Health, p. 91.

<sup>35</sup>John McNamara, M.D., Ph. D., "Toward A Model School Health Code," The Journal of School Health, (Vol. XLIII, October, 1973), p. 509.

<sup>36</sup>Herbert Simon, Administrative Behavior (The Free Press, New York, 1957), p. 20.

<sup>37</sup>Anderson, School Health Practice, p. 27.

## SOURCES CONSULTED

### A. BOOKS

- Anderson, C. L., Dr. P.H. School Health Practice. Saint Louis: The C. V. Mosley Company, 1972.
- Benenson, Alram S., Editor. Control of Communicable Diseases in Man. The American Public Health Association, 1970.
- Grout, Ruth E., M.P.H., Ph.D. Health Teaching In School. Philadelphia, London: W. B. Saunders Company, 1968.
- Harper, F. W. A Treatise On The Law Of Torts. Indianapolis, Ind.: Bobbs-Merrill Co., 1938.
- Lesnik, Milton J. and Anderson, Bernice, R.N., Ed.D. Nursing Practice and the Law. Philadelphia, Montreal: J. B. Lippincott Company, 1955.
- Nemir, Alma, M.D. The School Health Program. Philadelphia, London: W. B. Saunders Company, 1965.
- Simon, Herbert. Administrative Behavior. The Free Press, New York, 1957.
- Wilner, Daniel M.; Walkey, Rosabelle P.; and Goerke, Lenor S. Introduction To Public Health. New York: Macmillan Publishing Company, 1973.
- Wilson, Charles C., M.D., Editor. School Health Services. National Education Association and the American Medical Association, 1964.

### B. ARTICLES

- Aubrey, Roger F., M.A. "Health Education: Neglected Child of the School." The Journal of School Health, XLII (May, 1972).



Chinn, Peggy, R.N., Ph.D. "A Relationship Between Health and School Problems: A Nursing Assessment." The Journal of School Health, XLIII (February, 1973).

Ferinden, William E., Ph.D. "The Role of the School Nurse in the Identification of Potential Learning Disabilities." The Journal Of School Health, XLII (February, 1972).

Fricke, Irma B., R.N., M.S. "School Nursing For The 70's." The Journal of School Health, XLII (April, 1972).

Hawkins, N.G. "Is There A School Nurse Role?" American Journal of Nursing, (March, 1971).

International City Managers' Association. Administration of Community Health Services. Chicago, Illinois; The International City Manager's Association, 1961.

McNamara, John J., M.D., Ph.D. "Toward A Model Health Code." Journal Of School Health, Vol. XLIII (October, 1973).

#### C. PUBLIC DOCUMENTS

American School Health Association. Guidelines For The School Nurse In The School Health Program. Kent, Ohio: American School Health Association, 1974.

Johnson, Henry W., M.D. for Forsyth County Pediatric Society. "Health Care For Our Public Schools." Winston Salem/Forsyth County, 1975. (Mimeographed).

Long, Russel B., Chairman. Report Of The Committee On Finance. Washington, D.C.: Government Printing Office, 1975.

North Carolina State Board Of Health. North Carolina Immunization Level Survey Of Two Year Old Children. Division of Epidemiology, Raleigh, North Carolina, December, 1972.

School Health Coordinating Service. A Guide For Teacher Observation And Screening. Raleigh, North Carolina: State Board of Health And The State Department Of Public Instruction, 1964.

State Board Of Education. Public School Laws Of North Carolina. Charlottesville, Virginia: The Michie Company, 1971.

Winston Salem, North Carolina. Forsyth County Health Department Annual Report. (1972-73).

D. INTERVIEWS

Hines, Betty, School Principal at South Fork Elementary School,  
personal interview held in Winston Salem, North Carolina,  
January, 1975.

Joyce, Walter, School Principal, personal interview held in Winston  
Salem, North Carolina, February, 1975.

Pikula, Betty and Shuping, Robert, PTA representatives, personal  
interview held in Winston Salem, North Carolina, April, 1975.

Punger, Doug, Attorney At Law, personal interview held in Winston  
Salem, North Carolina, February, 1975.