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ABSTRACT

A study assessed the emergency health care preparedness of a north central Florida public school district in light of seven criteria: (1) school policies regarding delivery of emergency health care; (2) identification of school personnel responsible for rendering emergency care; (3) training levels of emergency health care providers (first aid and cardiopulmonary resuscitation); (4) availability of a first aid room with proper equipment; (5) school policies regarding parental notification and transfer of repsonsibility; (6) school policies regarding pupil emergency transportation; and (7) school recordkeeping regarding data retrieval, maintenance, and followup. The "Checklist Inventory for Assessing Emergency Care Preparedness in the Schools" was used to identify strengths and weaknesses of the district's 30 public schools. Findings indicated that less than half of the sampled schools had developed policies for sudden or chronic illness. Eighteen percent of the schools had not designated personnel to render first aid in the absence of school nurses or clinic aides. Less than 10 percent of schools required all their personnel to be trained in first aid and cardiopulmonary resuscitation. In 96 percent of the schools, a room and appropriate equipment were found for emergency care. Findings indicated that 93 percent of the schools had an adequate mechanism to notify parents or guardians about emergency care. Most schools (82 percent) also had an effective emergency pupil transportation policy. Most (93 percent) also maintained an accessible student emergency record file. (CB)

Assessing School Emergency Care Preparedness

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Running Head: EMERGENCY CARE

Assessing Emergency Care Preparedness

Introduction

Accidents are the leading cause of death for persons one to 38 years of age (Healthy People, 1979). Accidents kill more children one to 14 years of age than the six leading causes of death combined (Haering, 1979). The National Safety Council's figures for 1979 indicated that 57 percent of the accidents involving school age children which required medical attention or caused an absence of one-half day or more from school occurred on school grounds or in transit (McKenzie, 1980).

Schools should be prepared to deliver appropriate emergency health care when required. However, evidence has suggested that some schools are unprepared to deliver adequate emergency health care (McKenzie, 1977; Miller & Shunk, 1972; Winkelman & Madison, 1979).

Courts have held that teachers and school boards have a responsibility to supervise the activity of children in their care (Benton vs. School Board of Broward County, 386 So.2nd 831). Teachers and school boards stand to a limited degree en loco parentis to the

students under their supervision (Nelson vs. State, 319 So.2nd 154). Failure to render emergency care may result in charges of negligence (Cornacchia & Staton, 1979; Miller, 1975; Oberteuffer & Beyrer, 1966). Schools cannot deny their responsibility for providing emergency care to sick or injured students (NEA-AMA, 1964; Permuth, 1979).

A review of the literature revealed seven components which should comprise a school's emergency health care program (Kilander, 1968; McKenzie, 1977; Winkelman & Madison, 1979). These components included:

1. the school's policies with respect to the delivery of emergency health care;
2. the identification of school personnel responsible for rendering emergency health care;
3. the training levels of emergency health care providers respecting first aid and CPR;
4. the availability of a first aid room with proper equipment;
5. the school's policy with respect to parental notification and transfer of responsibility;

6. the school's policy with respect to pupil emergency transportation; and
7. the school's record keeping apparatus relative to data retrieval, maintenance, and follow-up.

The present study was undertaken to access the emergency health care preparedness of a north central Florida public school district in light of these seven criteria.

Also, two hypotheses were formulated. The authors postulated that school enrollment level (Hypothesis I) and classification as either elementary, middle, or secondary school (Hypothesis II) might influence the degree of emergency health care preparedness.

Methodology

The north central Florida county school district under investigation was composed of 30 public schools: 18 elementary, 6 middle, and 6 secondary. Each school was invited to participate in the study. School principals were asked to complete the survey instrument for their school.

Two independent variables were identified: school enrollment and school classification. School enrollment

was a variable consisting of six levels. As a variable, school classification consisted of three levels which were either elementary, middle, or secondary school designation. The dependent variable, emergency health care preparedness, was measured by the instrument, "A Check List Inventory for Assessing Emergency Care Preparedness in the Schools", developed by Kilander (1968) and adapted by Winkelman and Madison (1979). As this was a descriptive study, no control or comparison group was utilized.

The instrument utilized in this study was designed to identify the existing strengths and weaknesses in current school emergency care programs. The instrument generated data of sufficient quality to test for significant differences between groups of schools. Winkelman and Madison's (1979) inventory consisted of 29 items with range of three response choices. The response choices used by Winkelman and Madison were simplified for use in the present study. Response alternatives were:

A = the school has established this policy, standard or practice and carries it out effectively;

B = the school has established this policy, standard or practice but does not carry it out effectively;

C = the school has not adopted any policy of this nature.

Responses were operationalized via a numerical assignment of 3, 2, and 1, respectively. Eighty-seven was the highest score attainable using the Winkelman and Madison (1979) instrument. Instruments were color-coded by school classification. Principals were asked to indicate his/her school's enrollment level.

The instruments' validity was established through a review of the literature and the judgment of a jury of experts familiar with the components of a school emergency care program.

A packet of materials was mailed to the principal of each of the thirty schools. The packet included a cover letter which explained the study's purpose, a questionnaire, a self-addressed stamped envelope, and a

stamped post card bearing the school's name. Principals were asked to complete the questionnaire anonymously. The completed instrument and post card were to be returned under separate cover. Schools not returning the post card received subsequent mailings at two, four, and six weeks after the initial mailing. The study's return rate was 97 percent (N=29). Twenty-eight instruments were used in data analysis.

Comparative data analysis relative to Hypotheses I and II were tested through application of the Kruskal-Wallis One-Way Analysis of Variance as the data were of an ordinal nature. Significance was tested at the =.05 level. Descriptive data analysis was accomplisned through the calculation of mean, standard deviation, and percentages. Responses were analyzed to identify strengths and weaknesses within the sample's collective emergency health care program.

Results

With respect to Hypothesis I, analysis of data revealed no significant differences between groups regarding emergency health care preparedness as a function of school enrollment, X^2 (5, N=28)=11.04,

$p<.05$. School enrollment group means and standard deviations are noted in Table 1.

Table 1

School Enrollment Data

Enrollment	n	M	SD
0-250	1	---	---
251-500	4	74.8	6.3
501-750	15	71.1	8.4
751-1000	3	77.3	5.5
1001-1500	3	72.0	6.0
>1501	2	69.5	4.9
Collective	28	71.8	7.6

Concerning Hypothesis II, application of the Kruskal-Wallis One-Way Analysis of Variance found no significant difference in emergency health care preparedness as a function of school classification, X^2 (2, N=28)=5.99, $p<.05$. Schoool classification group means are found in Table 2.

Table 2

School Classification Data

Classification	n	M	SD
Elementary	17	70.8	8.2
Middle	5	77.2	6.8
Secondary	6	70.3	4.8
Collective	28	71.8	7.6

Discussion

In reviewing the literature, two limiting factors were encountered, the literature base was found to be (1) dated and (2) narrow in terms of research into the elements of the emergency health care program. Such factors indicate a lack of interest or publication in this vital area. The emergency care program needs of individual schools and school districts are varied. Given these factors, it is understandable why a standardized criteria for determining the adequacy or inadequacy of a school's or school district's emergency care program has yet to be developed. In the authors' opinion, the development of an instrument designed to determine the adequacy or inadequacy of a school's

emergency care program would be a significant step forward in the delivery of emergency care in the schools.

Written Emergency Care Policies

The adequacy of a sample's emergency care planning may be called into question when 54 percent of the schools in the sample failed to develop policies for sudden or chronic illness. McKenzie (1977) found that only 52.4 percent of schools in his study had fully developed emergency care policies. However, Winkelman and Madison (1979) reported that all the schools in their sample had written policies for general, accidental, and illness related emergencies. Similarly, Miller and Shunk (1972) found that 11 of 13 schools in their study had emergency care policies.

Essential to the implementation of any policy is its communication. This study's findings indicated that 43 percent of the sample schools did not inform their personnel of the emergency care policies. This finding was consistent with that of McKenzie (1977).

Incomplete written emergency care policies neither assist nor direct school personnel in meeting their

obligation to care for the children in their charge under en loco parentis. Protection of children under en loco parentis includes the delivery of emergency care to ill or injured students (McKenzie, 1977; Miller, 1975; Miller & Shunk, 1972; Permuth, 1979; Winkelman & Madison, 1979).

Identification of Personnel to Render First Aid

The literature indicated that school personnel responsible for rendering first aid must be identified and that actually all school personnel should be able to render first aid (Kilander, 1968; NEA-AMA, 1964). However, at a minimum, at least one or two persons trained in first aid should be available at all times (NEA-AMA, 1964; Oberteuffer & Beyrer, 1966). Personnel in high risk areas such as the gymnasium, laboratories, shops, home economics classrooms, playgrounds and cafeterias should be trained in first aid and CPR, and hence be designated as first aid providers.

This study found that 18 percent of the responding schools did not designate personnel to render first aid in the absence of the school nurse or clinic aide. A limitation of the instrument was that it failed to

collect data concerning the number of school nurses or clinic aides assigned to each school and their hours of availability. Twenty-eight percent of the schools responding did not inform their personnel as to their specific emergency care related responsibilities, thus indicating poor communication.

The study instrument failed to determine who was designated to provide first aid in the absence of the school nurse. Additionally, the instrument did not request the number or occupational roles of those designated to provide first aid. However, it is clear that some schools in the sample were guilty of poor communication of administrative policies defining the extent of school personnel's responsibility in a first aid emergency. It seems logical that poor communication would not contribute to the development of a comprehensive emergency care program nor meet school personnel's responsibility under en loco parentis.

Level of First Aid Training

It has been stated by several authors that it is an administrative responsibility to see that all school personnel, especially the classroom teacher, receive

some basic first aid training (Bucher, 1975; Byrd, 1964; Mayshark, 1977).

This study's findings indicated a uniformly low level of training. This study found that 89 and 93 percent of the schools in the sample did not require all their personnel to be trained in first aid and CPR, respectively. Training was evidenced by possession of a current first aid or CPR certificate. Further, 78 percent of the study schools did not require an orientation of their classroom teachers to the signs and symptoms of sudden illness.

These findings suggest a lack of emphasis by school administrators in assuring that their personnel received first aid or CPR training. These findings further suggest that first aid or CPR training is received on a voluntary basis and at personnel initiative. The largely voluntary nature of first aid and CPR training would suggest that such training is not offered on an in-service basis in a majority of the schools under study. These findings are consistent with those of Winkelman and Madison (1979) and McKenzie (1977).

The First Aid Room and Equipment

A room appropriate for the delivery of first aid must be avialable (Bucher, 1975; Cornacchia & Staton, 1979: NEA-AMA, 1964; Oberteuffer & Beyrer, 1966). Appropriate first aid supplies should be maintained and accessible in the event of an emergency.

Analysis of data suggested a high state of emergency care preparedness insofar as the first aid room and equipment is concerned for a majority of schools in the sample. Ninety-six percent of the respondents indicated that a room is available for the delivery of emergency care with adequate supplies.

McKenzie (1977) found that only 48 percent of the school districts in this study reported requiring schools to provide a first aid room. McKenzie (1977) further reported that 23.2 percent of the responding school districts did not make emergency supplies available. Miller and Shunk (1972) reported finding that first aid equipment available for emergency care in the schools in their study ranged from a complete selection of first aid supplies to bandaids. Winkelman and Madison (1979) found that only a few schools did not

provide a room exclusively for the delivery of emergency care.

Parental Notification and Transfer of Responsibility

In the event of an accidental injury or sudden illness, schools must notify a parent, guardian, or designated individual (Byrd, 1964; Cornacchia & Staton, 1979; Mayshark, 1977; NEA-AMA, 1964). The findings of this study indicate that 93 percent of the responding schools had an adequate mechanism to notify parents or guardians and did so in the event of an emergency. However, 22 percent of responding schools had no policy for the transfer of responsibility after first aid had been rendered. A very high percentage of responding schools did notify the student's parents or guardians in an emergency. This fact implies a policy concerning the transfer of responsibility. It is possible that respondents were confused by the inventory item regarding the transfer of responsibility and replied in the negative. Poor policy communication is reflected in that 53 percent of the responding schools did not inform parents or guardians as to their specific responsibilities in an emergency situation.

Winkelman and Madison (1979) found that all the schools in their sample had policies relating to the notification of a parent or guardian when an emergency arose. However, Winkelman and Madison (1979) reported that some schools did not communicate their emergency care policies or parental expectations to the parents or guardians. McKenzie (1977) found that about 89 percent of the responding districts designated an employee to notify parents or guardians in the event of an accident or illness. McKenzie (1977) further reported that 70 percent of the school districts in his sample did not inform parents or guardians of the district's emergency care policies.

Pupil Emergency Transportation

The literature indicates that pupil emergency transportation is usually performed by a parent, guardian, or designated friend and that emergency transportation policies should be developed locally (Cornacchia & Staton, 1979; Mayshark, 1977: NEA-AMA, 1964). The determination of the type of transportation, i.e., ambulance or parent's automobile, must be dictated by the situation.

This study found that a majority (82 percent) of the schools under study had effective emergency pupil transportation policies. It is not clear as to how much of the 18 percent responding in the negative was a result of misinterpretation of the inventory item or actually reflected incomplete policy planning. However, one must question the adequacy of the emergency care program in those responding schools who indicated either a lack of policy enforcement or no existing policy covering pupil emergency transportation. These date are consistent with those of Winkelman and Madison (1979) and McKenzie (1977).

A limitation existing in the instrument utilized in this study was that it did not generate data describing how pupils were transported depending upon the situation.

Emergency Related Record Keeping

Florida schools are required to maintain an Emergency Information Card file which includes emergency references for each student enrolled in the school. Schools should keep records of every accident or sudden illness affecting students as accurate records are

essential in protecting school personnel if a violation of en loco parentis is charged and a negligence suit is brought (Bucher, 1975; Byrd, 1964; NEA-AMA, 1964).

This study found that 93 percent of the schools responding maintained an accessible student emergency record file. However, 43 percent of the responding schools either had no policy or lacked implementation of an existing policy that would require their teachers to be knowledgeable in the utilization of the emergency file. These findings are consistent with those of Winkelman and Madison (1979). Further, this study found that while 96 percent of the respondents required the completion of an accident report, 43 percent of the respondents either had no policy or lacked policy implementation in the follow-up of emergency cases. These findings are consistent with those of Winkelman and Madison (1979) and McKenzie (1977).

The study findings suggested a lack of emphasis on the part of school administrators regarding emergency related record keeping. The existence of a student emergency record file implied an expectation that school personnel be knowledgeable in its utilization. Time

lost due to ignorance of system workings may be crucial in the delivery of emergency care.

Recommendations

The following recommendations were made based upon the study findings and the related review of the literature:

1. If this study is to be replicated in the future, the check list inventory utilized should be revised to ellicit specific data regarding the first aid training levels of school personnel, occupational roles of first aid providers, number of school nurses or clinic aides assigned to the school along with hours of availability, and methods of pupil transportation;
2. A communication network should be developed within each school to insure adequate dissemination of policies concerning emergencies;
3. Orientation ses. ions as to the signs and symptoms of sudden illness and the proper utilization of the student emergency record

file should be held for teachers and other appropriate personnel; and

4. Further research into the components of the school emergency care program should be conducted with the intent towards the development of a standardized criterion for determining the adequacy or inadequacy of a school's emergency care program.

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