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Perceptions of Lifeguard Training Programs from Park District Aquatic Managers in Illinois

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Perceptions of Lifeguard Training Programs from

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(TITLE)

BY

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THESIS

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ABSTRACT

SMITH, Erika L. Perceptions of Lifeguard Training Programs from Park District Aquatic Managers in Illinois. M.S. in Physical Education, 1993, 71 pp. (D. Wolf).

The responses from park district personnel concerning the American Red Cross Lifeguard Training program (ARCLTP) and the Ellis & Associates National Pool and Waterpark Lifeguard Training program (E&ALTP) were examined and analyzed in this study. Subjects were employees from park districts, which are members of the Illinois Association of Park Districts and/or the Illinois Park & Recreation Association. Data were collected by a questionnaire, which measured each lifeguard training program's rescue procedures in terms of: 1) emergency action plans, 2) communication systems, 3) entries, 4) approaches, 5) rescues, 6) risk management and 7) legalistic concerns. Demographic data were analyzed by frequency counts and percentages. A chi-square analysis with a .05 level of significance was computed on selected responses from subjects. The results of the study yielded a relatively small number of significant differences between the lifeguard training programs. There were five statements which exhibited a significant difference. Whistles were more commonly used as a communication device than hand signals for both programs. E&ALTP facilities more frequently than ARCLTP facilities had lifeguards jump directly off their stands when entering deep water for an emergency. ARCLTP lifeguards were much more apt to dive off

the deck in deep water to rescue a victim. The entry most commonly used by E&ALTP was the compact jump entry. Because the E&ALTP requires a lifeguard to possess a rescue tube, all of E&ALTP respondents agreed that lifeguards carry a piece of equipment while on duty. Because ARCLTP lifeguards were taught lifesaving skills which do not require the use of equipment, these facilities indicated having equipment 5-10 feet from the lifeguard chair instead of carrying equipment. The other 15 statements in the questionnaire did not exhibit a statistical difference. Due to the variation of the answers received, the author cannot conclude that aquatic managers perceived either program to be superior to the other. A lack of substantial difference in the data demonstrates that each certification meets the requirements of an efficient lifeguard training program.

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CHAPTER I

INTRODUCTION

"IPME Pool Accident Ends in Death." This headline appeared in The Daily Illini in Champaign-Urbana, Illinois on September 19, 1992. The sordid details followed:

> A University student, who was assumed trying to swim the length of the pool, died at Carle Foundation Hospital where he had been admitted in critical condition after a swimming incident at the Intramural Physical Education Building. Two lifeguards removed the victim from the pool after a woman noticed him underwater. The lifeguards performed cardiopulmonary resuscitation (CPR) until emergency medical service personnel arrived (Puch, 1991).

Another incident occurring at a private country club swimming pool was just as tragic:

> A four and a half year-old girl was pronounced brain dead and removed from life support systems eight days after a swimming lesson. After swimming the required length of the pool at the end of the lesson, the girl reportedly passed out with foam coming from her mouth. Attempts at CPR were initiated by swim instructors until the local rescue squad arrived (Carroll, 1990).

These situations reveal that drownings can happen at any time or place for a number of reasons. Because situations like these occur, it is essential that lifeguard training programs require similar standards of care.

O'Conner (1968) reported that an average of 6,722 U.S. deaths by drowning occur each year, while Plueckhahn (1979)

estimated 150,000 drownings happened internationally. Circumstances may change, but the heartaches and sorrows caused are similar. In spite of the efforts of many public agencies who sponsor water safety programs, drownings and near-drownings do occur.

"Fifty-four percent of the population across the nation enjoy swimming as a leisure activity, and total participation exceeds all other popular activities such as walking for pleasure, bike riding, camping, tennis, fishing and golf" (Fuerst, 1992). Since swimming is one of the top ten participation sports across the country and because there is an ever-increasing number of aquatic facilities being built to meet the demand, lifeguard job responsibilities have undergone extensive changes (Tyson, 1990). High levels of training are required in order to obtain competent lifeguards for varying facilities.

The present study was concerned with aquatic managers' perceptions on how lifeguard training programs prepare lifeguards to respond during incidents occurring at particular facilities. Drownings, lifeguard responsibilities and rescue procedures have been examined in the media (Andres, 1979; Dimike, 1991; Wernicki, 1991; O'Conner, 1986; Rodgers, 1989 et. al.), but no one has screened managerial views or opinions about different lifeguard training programs.

Need For The Study

It is the lifeguard's responsibility to recognize a swimmer in distress and provide the necessary rescue and emergency care. The level of training and physical abilities required of lifeguards varies greatly from facility to facility (McCloy, 1988). No single action will prevent all drownings. It is the combination of applied learning experience that guides the rescue procedures lifeguards use when a drowning or near-drowning occurs.

People have been questioning, for a long time, which lifeguard training program best prepares lifeguards for emergency situations. Organizations have updated their rescue procedures over periods of time in order to improve the lifeguard training programs. Approximately every five years the American Red Cross provides new material on all of its aquatic-related courses (Giles, 1990). The Ellis & Associates National Pool and Waterpark Lifeguard Training program revises its textbook annually so that the contents never become outdated (Ellis, 1992).

This investigation was undertaken because there is a need for additional research concerning lifeguarding in order to determine which type of program offers the most comprehensive training in rescue procedures. Questionnaires were distributed to various park districts in the state of Illinois and provided the data for the statistical analysis.

Statement Of The Problem

The purpose of this study was to critically analyze how pool supervisors/managers or aquatic directors perceive different lifeguard training programs in the preparation of lifeguards rescuing distressed swimmers. Data was gathered from public swimming pools or public water recreation parks in the state of Illinois. It is hypothesized that the rescue procedures of the American Red Cross Lifeguard Training program and the Ellis & Associates National Pool and Waterpark Lifeguard Training program would be perceived by aquatic personnel to be similar.

Specific Purposes Of The Study

In order to investigate aquatic managers' perceptions of each lifeguard training program involved with this research, the following were considered:

1. Demographic data from the total number of respondents.
2. Whether or not the park districts followed the requirements of the lifeguard training program used.
3. Determination of a park districts' concern for safety of patrons by including preventative strategies beyond the lifeguard training program requirements within each facility.

4. Whether any park districts incorporate risk management plans or legalistic concerns into their policies.

Definition Of Terms

The following terms were used in the present study:

1. Accident: A happening that is not expected, sometimes resulting in injury, loss or damage (Guralnik, 1982).
2. Distressed swimmer: A swimmer who exhibits behavior which indicates an inability to remain upon the surface of the water (American, 1990).
3. Drowning: To die by suffocation in water (Guralnik, 1992).
4. Emergency: A sudden, unexpected set of circumstances demanding immediate action (Guralnik, 1982).
5. Lifeguard: An expert swimmer employed at an aquatic facility to prevent drownings and provide rescue and emergency care (Guralnik, 1982).
6. Lifeguard Training: A certification process which disciplines swimmers to provide supervision at aquatic facilities.
7. Near-drowning: A water-related incidence in which the victim is technically alive when being brought from the water (Carroll, 1990).
8. Negligent: Habitually failing to do the required action or carelessness in manner (Guralnik, 1982).

9. Pool supervisor/manager or aquatic director: Individuals who oversee the operations of aquatic facilities.
10. Rescue: To save a swimmer from danger (Guralnik, 1982).
11. Risk management: The manner of handling, controlling or directing a program which reduces the chance of injury, damage or loss (Guralnik, 1982).
12. Swimming pool: An artificially created tank, either indoor or outdoor, usually with water filtering equipment which is used by residents of the community or surrounding communities (Guralnik, 1982).
13. Victim: A patron, in or out of the water, who needs help.
14. Waterpark: An aquatic facility that has multi-attractions to offer to numerous guests, and where a large lifeguard staff is required (Ellis, 1992).

Scope Of The Study

The study was conducted under the following conditions:

1. Subjects of the study were pool supervisors/managers or aquatic directors, full or part-time, at public swimming pools and/or public water recreation parks in the state of Illinois.

2. The evaluation of each subject's response was specific to rescue procedures and the effectiveness of lifeguards when they respond to accidents or emergencies while on duty.
3. No study of reliability or validity of the instrument was conducted.
4. No generalizations were made concerning any aquatic facility outside the state of Illinois.

Limitations Of The Study

The study was limited by the following conditions:

1. Control over the accuracy of each subject's response to the questionnaires was not attempted.
2. This study was not a representative sample for aquatic facilities nation-wide.
3. The investigator cannot be assured that each respondent interpreted all of the questions correctly.
4. The personal bias of the subject(s) may have resulted in inaccurate response(s) of the questionnaires.
5. Current information providing background for this study was not readily available. Much of the literature was dated.

CHAPTER II

REVIEW OF RELATED LITERATURE

Various aspects of the American Red Cross Lifeguard Training program (ARCLTP) and the Ellis & Associates National Pool and Waterpark Lifeguard Training program (E&ALTP) provided background information. Each program utilizes a unique strategy to teach elementary and progressive forms of swimming and lifesaving skills.

Quite contrary to the public opinion, lifeguarding is non-glamorous, boring, tedious, exacting work (Borozne, 1977). The job requires lifeguards to stay attentive and alert at all times in order to practice preventative lifeguarding. Because this field can be complex, elements involved in the rescue procedures of the lifeguard training programs have been presented under the following headings: (a) Emergency Action Plans; (b) Communication Systems; (c) Victim Recognition; (d) Entries; (e) Approaches; (f) Rescues; (g) Risk Management; (h) Legalistic Approach and (i) Summary.

Emergency Action Plans

The ARCLTP and the E&ALTP agree that each aquatic facility should have an outline for handling emergency situations (American, 1990 and Ellis, 1992). The basic principles of the emergency action plan will affect the entire rescue. Who holds the responsibility for developing such an outline? Obviously, no two facilities are alike. The E&ALTP and the ARCLTP infer that it is the management's obligation to implement an emergency action plan suitable for its own facility.

The courses offer a similar scenario for designing emergency action procedures. The E&ALTP refers to its plan as the emergency action system, which includes primarily forms of lifeguard communication (Ellis, 1992). An Ellis & Associates staff member will also visit a facility to compose an emergency action plan calculated to meet the layout of each facility.

The ARCLTP, however, further states that a detailed plan for handling emergencies should contain procedures to control the crowd in an orderly fashion, allow for proper care of the victim, and provide supervision of the facility as well as easy access to the victim by emergency medical service personnel (American, 1990). This plan must also include employees from local law enforcement, fire departments, water authority agencies, chemical supply

companies and representatives from city organizations (American, 1990). In addition, emergency procedures, rules, special equipment and first aid techniques must be overlearned so each member of the lifeguarding team can work efficiently and effectively (Andres, 1979). Overall, the ultimate goal in lifeguarding and particularly in handling emergencies is to be able to function as a team (Palm, 1974).

Communication Systems

An important element of an emergency action plan is the communication system (Dimike, 1991). Each facility should have its own signals with which the entire staff is familiar. These must be simple and easy to understand. The programs suggest the use of whistles, hand signals, telephones, flags and electronic devices as ways to inform other lifeguards of situations that may arise (American, 1990 and Ellis, 1992). It is the management's decision to choose a system which meets the needs of a facility.

One of the most common types of communication systems is the use of a whistle. Each lifeguard training program suggests that one short blast is to get the swimmer's attention, two short blasts are to get the attention of another lifeguard, and either three short blasts or one long blast may be used for an emergency situation (American, 1990

and Ellis, 1992). The ARCLTP and the E&ALTP have similar messages for communicating, but the meanings of some of the actions are different. For example, when a lifeguard taps the top of the head it means that the situation is under control in the ARCLTP (American, 1990), whereas in the E&ALTP, it refers to watching another lifeguard's area (Ellis, 1992).

Victim Recognition

The aspects of victim recognition vary within each program. Andres (1979) suggests that lifeguards need to distinguish between distress and drowning situations. Both programs describe the characteristics of the various types of victims by using terms such as active and passive. Palm (1974) characterized potential victims as "swingers, towel flickers, corner jumpers, gutter grabbers, parent instructors, dare devils, leaners, swimmers under the board, teasers and dunkers." The E&ALTP further gives meaning to high risk guests, risk locations and times when most rescues will occur (Ellis, 1992). The E&ALTP also differentiates between "wet" and "dry" drownings. A "wet" drowning is caused by fluid entering the lungs of the victim causing extensive tissue and brain damage, whereas a "dry" drowning happens when droplets of water irritate the epiglottis causing it to close and preventing air from passing into the

lungs (Ellis, 1992 and Podolsky, 1981). A lifeguard cannot always determine what kind of drowning has occurred at the time of the rescue. But, it is important for lifeguards to be aware of this concept.

Furthermore, the E&ALTP is recognized for its 10/20 second protection rule, which signifies that a lifeguard has ten seconds to spot a victim in need of rescue and twenty additional seconds to perform that rescue (Ellis, 1992). The ARCLTP implies that a lifeguard should not be concerned with what causes a swimmer to need assistance, but whether or not the victim can support himself/herself and what type of behavior will be expected from that victim (American, 1990). Both programs do indicate, however, that a rescue should be performed with speed and care.

Entries

The beginning of any rescue for a distressed or drowning victim starts with an entry into the water. For spinal injuries, the ARCLTP and the E&ALTP use some sort of ease-in entry to prevent unnecessary movement of water. For shallow water, a run, leap or jump is acceptable in both courses. In deep water, however, there is a major difference among the two programs. Because the E&ALTP has a mandatory rule that all lifeguards must have a rescue tube in their possession, a compact jump entry is put into

practice (Ellis, 1992). The ARCLTP does not require a piece of rescue equipment to be carried; therefore, it includes stride jump entries, feetfirst entries from a height and a shallow dive (American, 1990). But, when an American Red Cross lifeguard enters the water holding a rescue tube, he/she also utilizes the compact jump entry. The two programs are similar in this requirement.

Approaches

The ARCLTP and the E&ALTP exercise either a crawlstroke or breaststroke to approach a victim (American, 1990 and Ellis, 1992). This is an essential part of every rescue. During an approach, a lifeguard can evaluate the situation and talk to a victim to calm and reassure him/her in a manner of seconds. The E&ALTP states a lifeguard must hold a rescue tube in front of the chest and between the lifeguard and the victim at all times (Ellis, 1992). This allows the lifeguard to be in a position to do the rescue and reduces the possibility of other patrons in the pool from grabbing the equipment (Ellis, 1992). Although the ARCLTP does not mention constantly carrying a piece of equipment, it suggests that a rescue device should be used to ensure the lifeguard's safety. Tygerson (1972) claims the best policy is "stick with the ship." A flotation

apparatus will keep a lifeguard safer until the rescue is completed.

The ARCLTP adds a ready position when preparing to make contact with the victim. The ready position allows the lifeguard to protect himself/herself from a grasping victim (American, 1990). "A ready position is stopping beyond the victim's reach (approximately six feet), tucking legs under the body, and sweeping arms forward beneath the surface while leaning away from the victim" (American, 1990).

The ARCLTP additionally defines an approach during short versus long distances. For short distances, a lifeguard keeps his/her head above the water maintaining eye contact with the victim. For long distances, however, a lifeguard swims out to the victim raising his/her head occasionally to periodically check where the victim was last seen. The E&ALTP says that a lifeguard should keep his/her eyes on the victim at all times (Ellis, 1992).

Rescues

The curriculum of each lifeguard training program follows particular theories when referring to rescue procedures. Both programs contain precise instructions for rescues in shallow water, deep water and for various victims. The ARCLTP includes types of rescues with or without equipment at any depth of water. Even though the

E&ALTP requires rescue equipment to be carried at all times, the same sort of rescue techniques are utilized.

For example, a front surface approach in the ARCLTP is performed primarily on a passive victim or unconscious victim who may need mouth-to-mouth resuscitation. The lifeguard reaches for the victim's wrist (right to right, left to left) rotating the victim underwater onto his/her back and then into a do-si-do position, where the lifeguard's arm is over the victim's shoulder and under the victim's back in order to begin rescue breathing (American, 1990). A technique in the E&ALTP, called the dip swing, is similar except the lifeguard lifts the victim's arm up out of the water instead of through the water in a face down position (Ellis, 1992).

Based upon safety statistics, the E&ALTP became the first national lifeguard training program to eliminate body contact rescues and advocate exclusive use of the rescue tube (Ellis, 1992). After much experimentation, the E&ALTP considers the rescue tube as the safest, most effective rescue device (Ellis, 1992). This is why the E&ALTP requires a rescue tube to be held at all times regardless of the depth of the water, but especially during deep water rescues. An Ellis & Associates rescue tube including the rope is about 10-12 feet in length, whereas an American Red Cross rescue tube including the rope is 6-8 feet. Another difference is that an American Red Cross rescue tube has

fastenings which enable the rescue tube to be used as a throwing device as well as in swimming assists. This rescue tube can be clasped around the victim or the lifeguard for additional support (American, 1990). The E&ALTP has found that the buckles can cause injuries to the lifeguard and/or the victim (Ellis, 1992).

Both programs enforce that no equipment, except a backboard, is to be used when dealing with a suspected spinal injury. Both programs use a technique which stabilizes the spine by applying pressure with the forearms/hands and rolling under the victim: head/chin support and squeeze play, respectively (American, 1990 and Ellis, 1992). The only difference in this strategy is that the E&ALTP requires the lifeguard to pinch the nose of the victim (Ellis, 1992). The programs also use a maneuver which grasps the victim's arms, positions the arms against the victim's head and rotates the victim faceup toward the lifeguard's body: head splint and vise grip, respectively (American, 1990 and Ellis, 1992). Each technique may be performed in shallow and deep water with a few modifications, although the head splint or vise grip is used primarily in shallow water.

Another difference between the two programs for rescues during spinal injuries is how the victim is placed upon the backboard and removed from the water. The ARCLTP informs lifeguards to place the backboard diagonally under the

victim from the side with the foot end of the board descending in the water first and allowing it to slowly rise up toward the victim (American, 1990). While the E&ALTP says to submerge the backboard so that it is under, but not touching, the victim and move the backboard to a centered position underneath the victim (Ellis, 1992).

Concerning the removal of the spinal injury victim from the water, the ARCLTP informs the lifeguards to position the backboard perpendicular to the side of the pool keeping the board as horizontal as possible (American, 1990). The backboard is then lifted out of the water. The E&ALTP, however, tells lifeguards to pull and push the backboard in a sliding action out of the water until the foot end rescuer has his/her forearms against the deck (Ellis, 1992). For deep water spinal injuries where shallow water is not available, the ARCLTP says to keep the victim stabilized until emergency medical service personnel arrive (American, 1990). It also suggests the use of fins to help keep the victim at the surface of the water. The E&ALTP states that lifeguards may choose to insert rescue tubes underneath the backboard, once it is in position, and support the victim (Ellis, 1992). In addition, the use of ladders, life lines or pool corners for more support will help with the immobilization of the victim on the backboard (Ellis, 1992). Both programs mention that bystanders can be used but stress that the lifeguard must tell them exactly what to do.

Risk Management

McCloy (1988) believes that there needs to be more attention paid to problems of aquatic risk management by those responsible for swimming areas. Since 1985, the number of drownings has been significantly reduced each year because of the risk management efforts and loss-control programs now implemented (Ellis, 1992). "Aquatic professionals must do everything in their power to acknowledge these dangers and control the risks" (Carroll, 1990).

Unlike the ARCLTP, the E&ALTP conducts a risk management program for the facility in which a lifeguard works (Ellis, 1992). Independent audits, where an unfamiliar Ellis & Associates staff person comes unannounced to a facility to observe how lifeguards are functioning in emergency situations, is part of risk management (Ellis, 1992). An audit is a formal, regulatory process performed by Ellis & Associates to periodically examine the correctness of lifeguards at facilities which use its program. Ellis & Associates will sometimes view lifeguards through the use of a hidden camera in order to evaluate the lifeguard's skills without their knowledge. E&ALTP risk management also includes facility inspections to ensure that all safety and insurance recommendations are being followed.

Emergency procedures should be clearly mapped out with a step by step plan for a variety of situations that may arise during normal operation hours (Berry, 1992). These plans must be practiced regularly through in-service training sessions which may suggest revisions to improve efficiency. The E&ALTP recommends at least four hours per month be spent doing in-service trainings (Ellis, 1992). If an American Red Cross aquatic facility does not establish in-service training programs, it is the lifeguard's responsibility to review their own skills. Both programs imply that in-service training sessions should meet the needs of each facility (American, 1990 and Ellis, 1992). In-service training sessions must include physical training and conditioning, fitness testing, preventative lifeguarding skills, spinal injury management, emergency procedures, cardiopulmonary resuscitation, first aid techniques and simulations of situations.

American Red Cross facilities can devise their own type of risk management program. If a facility chooses to begin a risk management system, there are some basic steps to follow. These include identifying the risks, evaluating the risks, development of risk management loss control strategies, implementing those strategies and evaluating the effectiveness of the risk management program (Langendorfer, 1990). This aspect of lifeguard training programs is fairly

new and important for future lifeguard training program revisions.

Legalistic Approach

Legal liability is an important concern of any aquatic facility and greatly influences the actions of lifeguards. Each ARCLTP and E&ALTP manual includes legal issues. Aquatic facilities have had to be extra careful about negligence with the increase of lawsuits over the past few years. Too many times lifeguards enjoy the socializing that can come with the job (Griffiths, 1987). As a result, the lifeguards become inattentive to the pool patrons, and patron safety is jeopardized (Griffiths, 1987). Griffiths (1987) claims that there are advantages to using the law to instill good lifeguarding techniques: making the approach to the issue contemporary and realistic, informing lifeguards that they can be taken to court for negligence, introducing a type of gamesmanship into the lifeguard's training and utilizing actual and current case studies as examples in the training.

Lifeguards will do a better job when they understand that they can be held liable for their own negligence, either by acting improperly or failing to act at all (Griffiths, 1987). Few lifeguards stop to think what impact a drowning in an area under their protection would have on

their personal life (Hunsucker, 1991). This impact may be felt psychologically, emotionally, behaviorally, but mostly financially.

A plaintiff must prove negligence on the part of the defendant in order to obtain compensation for injury (Osinski, 1988). Even if the lifeguard does not have any assets, the plaintiff will fight to obtain money from the lifeguard's parents or family and the aquatic facility where the drowning occurred. While the employing agency will carry the brunt of the financial obligation, the lifeguard may be required to testify in the legal proceedings (Hunsucker, 1991). The lifeguard will constantly have the dilemma brought up repeatedly since most court cases can last a number of years. Consequently, topics of liability and negligence must not only be discussed during the initial course curriculum and during in-service training sessions, but should be emphasized throughout the entire pool season.

Summary

Why are there contradictions between two well-respected lifeguard training programs? Both courses have developed techniques which train lifeguards to act upon emergencies. The differences stem from the fact that practitioners within the aquatics profession have studied relevant material in-depth and have produced unique emergency and rescue skills.

The need for continual evaluation and assessment of current lifeguard standards and training is vital to the success of any lifesaving operation (D'Arnall, 1976). The ARCLTP has been recognized for years as the certifying agency (D'Arnall, 1976). Even though many park districts in the state of Illinois have not heard of the E&ALTP, awareness of its program is growing rapidly, causing a slight competition between the American Red Cross and other organizations which certify lifeguards.

The skills in each program are similar in some ways and different in others. No matter how the programs are evaluated, it is clear that they contain the essential elements involved to rescue a victim. There is speculation as to which program is better. Pool supervisors/managers or aquatic directors from facilities throughout the state of Illinois have expressed their opinions about the ARCLTP and the E&ALTP which are revealed in this study.

CHAPTER III

PROCEDURES

The present investigation critically analyzed how pool supervisors/managers or aquatic directors perceived the American Red Cross Lifeguard Training program (ARCLTP) and/or the Ellis & Associates National Pool and Waterpark Lifeguard Training program (E&ALTP).

Instrumentation

A questionnaire was used to collect data comparing each lifeguard training program and demographic data. The questionnaire (Appendix B) measured each lifeguard training program's rescue procedures in terms of: 1) emergency action plans, 2) communication systems, 3)entries, 4) approaches, 5) rescues, 6) risk management and 7) legalistic concerns. The form contained a list of 20 short phrases (i.e. Lifeguards attend a preseason training session. Hand signals are used as a communication system between lifeguards. Rescue equipment is between the lifeguard and the victim when attempting a rescue).

Statements on the questionnaire were designed to reflect aspects of one or both of the lifeguard training programs evaluated. Four phrases pertained to emergency action plans. Two sentences applied to communication systems. Two statements were concerned with entries into the water. Two sentences indicated the location of equipment in order to assume how a rescue might be performed. Four phrases pertained to approaching a victim. Six statements related to risk management and legalistic approaches.

If a statement applied to the park district's lifeguard training program, the respondent was to indicate whether he/she agreed "A" or disagreed "D". If it did not pertain to the park district's lifeguard training program, the respondent was to circle "N" for not applicable. There was a short answer question asking respondents their opinion to the positive and negative aspects of the lifeguard training program used. Respondents were able to make any additional comments they desired.

The questionnaire asked for demographic data about the subjects. Information obtained included job title of the respondent, zip code, area code, population, acreage owned by the park district, the number of lifeguards staffed, lifeguard certification requirements of the facility, and the number and type of swimming pools at each facility.

Identification Of Subjects

For the sake of identification purposes, each questionnaire was numbered and recorded into the computer for data analysis, however, subjects remained anonymous. Park district personnel were asked to identify which lifeguard training program the aquatic facility utilized. Most park districts used either the ARCLTP or the E&ALTP. If a park district used ARCLTP and E&ALTP, it was classified as "both." If a park district used neither of these lifeguard training programs, it was categorized as "other."

Park districts, which are members of the Illinois Association of Park Districts and/or the Illinois Park & Recreation Association, were chosen for the following reasons:

1. Each park district is well-known and recognized within the state of Illinois because of its membership to these organizations.
2. The investigator had access to a mailing list for these organizations.
3. The investigator chose not to include facilities such as motels, universities, and private clubs, where lifeguards may not be present.
4. Most counties will have at least one park district giving the investigator a wide-ranged, representative sample of the state of Illinois.

Collection Of Data

A cover letter (Appendix A), along with the questionnaire, was distributed to park district pool supervisors/managers or aquatic directors within the state of Illinois on February 12, 1993, requesting cooperation and assistance in this study. The surveys were to be returned by March 15, 1993.

Two hundred fifty-eight questionnaires were mailed. Sixty-three percent of the surveys were returned by mid-March. Fifteen percent of the questionnaires were not used in the data analysis because respondents indicated that their facility did not have a public swimming pool or public water recreation park. One hundred twenty-four questionnaires (48 percent of the original population) were used in the statistical analysis.

Analysis Of Data

Data analysis was carried out using the Frequencies Program from the Statistical Package for the Social Sciences (SPSS). Frequency counts and percentages for each question were further broken down by demographical data: geographical region, size of the park district, the number of lifeguards staffed, lifeguard certification requirements of the park district, and the number and type of swimming

pools at the facility. A chi-square analysis with .05 level of significance was used to determine whether statistically significant differences existed in subjects' responses depending upon the lifeguard training program utilized at a park district.

CHAPTER IV

RESULTS

To determine how pool supervisors/managers or aquatic directors perceive different lifeguard training programs in the preparation of lifeguards rescuing distressed swimmers, a questionnaire (Appendix B) was distributed to various park districts in the state of Illinois. The comparison of the American Red Cross Lifeguard Training program (ARCLTP) and the Ellis & Associates National Pool and Waterpark Lifeguard Training program (E&ALTP) was calculated by frequency counts, percentages and a chi-square analysis with .05 level of significance.

Demographic Data

In attempting to identify distinctions among the demographic data, subjects were asked to record the area code, population size, acreage owned by the park district, the number of lifeguards staffed, and the number of indoor or outdoor swimming pools at the facility. The following tables and figures represent percentages for each

lifeguard training program.

Figure 1 addresses the frequency of each lifeguard training program according to area code. It was the author's understanding that E&ALTP began implementing its program in metropolitan areas (i.e. Chicago and Peoria) with the intention to expand within the state. The E&ALTP focused primarily on waterparks but, since then, has been implemented at many swimming pools. However, the fact remains that most of the park districts in the state of Illinois still practice the ARCLTP. More than half of the subjects interviewed within each area code indicated that their facility utilizes the ARCLTP. This evidence is represented by Figure 1.

Another expectation confirmed by the data collected was that the closer a park district is to a large city exceeding 50,000 residents, the more the awareness and utilization of the E&ALTP. Table 1 discloses frequency of use of each lifeguard training program by population size.

The investigator estimated the distribution of populations in Illinois by using a 1992 Rand McNally Road Atlas. It was discovered that 75 percent of towns in Illinois numbered less than 10,000 residents. Eighteen percent of the communities fell between a population of 10,000 to 50,000. While only seven percent of the cities were above the 50,000 range.

FIGURE 1. Lifeguard Training Programs Presented By Area Code

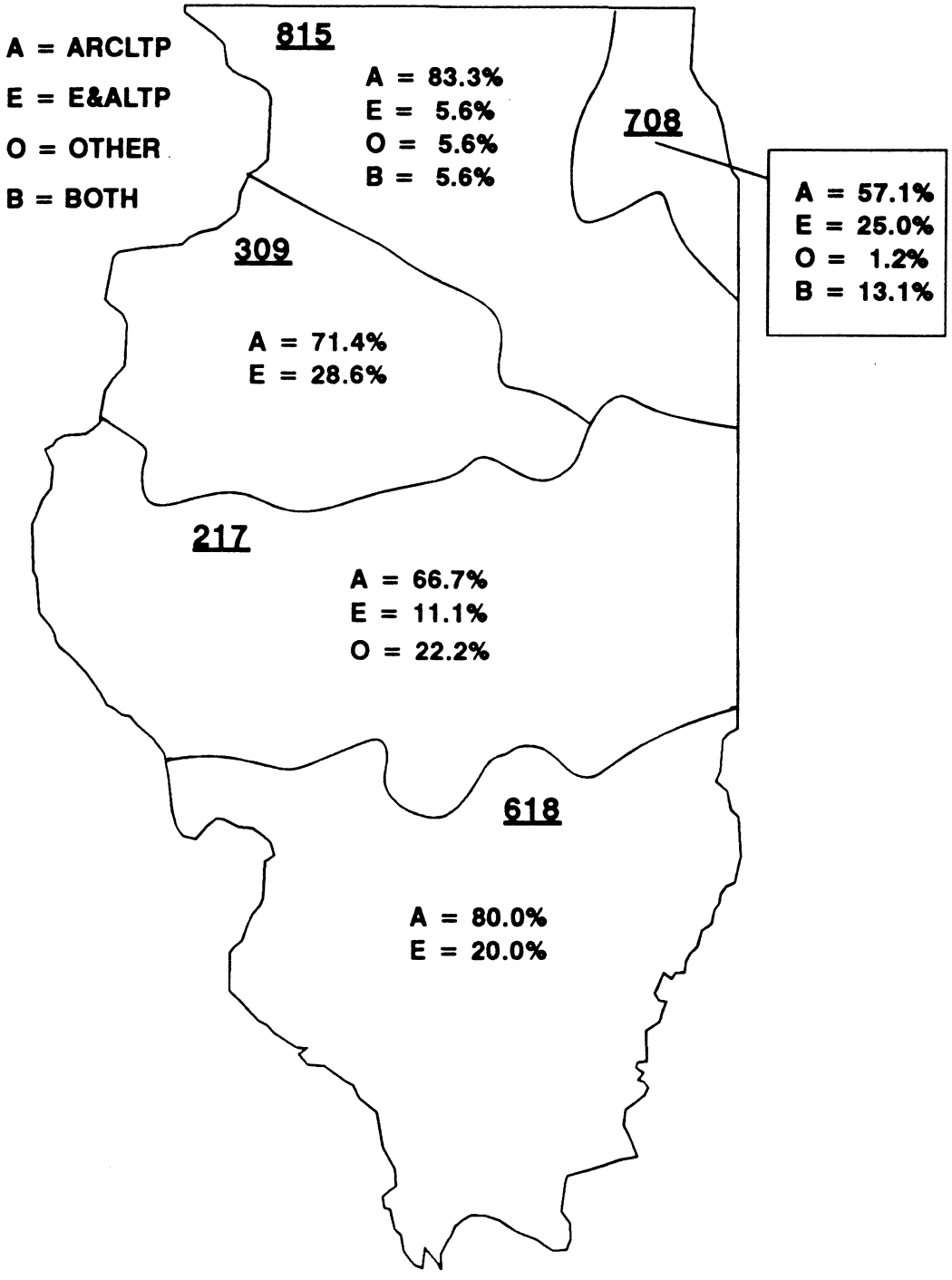


TABLE 1

EFFECT OF POPULATION ON LIFEGUARD TRAINING PROGRAM USAGE

POPULATION	ARCLTP	E&ALTP	BOTH	OTHER
≤ 10,000 (n=21)	85.7%	9.5%	4.8%	0.0%
> 10,000 & < 50,000 (n=79)	62.0%	20.3%	11.4%	3.8%
≥ 50,000 (n=21)	47.6%	33.3%	9.5%	4.8%

Because there are more towns with populations less than 10,000 residents in the state of Illinois and the E&ALTP is used mainly in larger cities, it was no surprise that the percentages in Table 1 reflected the use of the ARCLTP. Cities with smaller populations have few, if any, swimming pools thus requiring people to travel to a larger, surrounding community which does provide a swimming pool.

The aforementioned theories are also supported by the data when analyzed according to acreage owned by a park district and the number of lifeguards employed at facilities. As shown in Table 2, park districts mostly used the ARCLTP regardless of size. Even in park districts with more than 350 acres, the ARCLTP outnumbered the E&ALTP by half.

TABLE 2

EFFECT OF ACREAGE ON LIFEGUARD TRAINING USAGE

ACREAGE	ARCLTP	E&ALTP	BOTH	OTHER
≤ 150 (n=43)	76.7%	11.6%	4.7%	2.3%
> 150 & < 350 (n=22)	68.2%	22.7%	9.1%	0.0%
≥ 350 (n=36)	52.8%	25.0%	16.7%	2.8%

Table 3 represents the number of lifeguards employed by a facility and how this number relates to the lifeguard training program utilized. As shown in Table 3, most facilities used the ARCLTP. However, the E&ALTP had an increase in percentage at facilities that staff 40 or more lifeguards.

TABLE 3

LIFEGUARD TRAINING PROGRAMS RELATED TO NUMBER OF LIFEGUARDS

LIFEGUARDS	ARCLTP	E&ALTP	BOTH	OTHER
≤ 25 (n=21)	66.7%	19.0%	9.5%	0.0%
> 25 & < 40 (n=79)	65.8%	16.5%	11.4%	5.1%
≥ 40 (n=20)	55.0%	40.0%	5.0%	0.0%

Park districts in large cities are likely to have more than one swimming pool or a water recreation facility, therefore requiring a greater number of lifeguards on duty. As supported by the data in Table 3, the number of lifeguards directly affected the use of the E&ALTP when referring to a large staff.

Subjects were asked to indicate how many and what type of swimming pools were at their facility. The actual number of indoor swimming pools totaled 38 (18.3 percent) while the sum of outdoor swimming pools was 170 (81.7 percent). Of 124 questionnaires, 15 respondents indicated having indoor swimming pools, 88 subjects indicated having outdoor swimming pools and 20 respondents indicated having both indoor and outdoor swimming pools. This data was not used in the comparison of programs.

Subjects' Responses To The Questionnaire

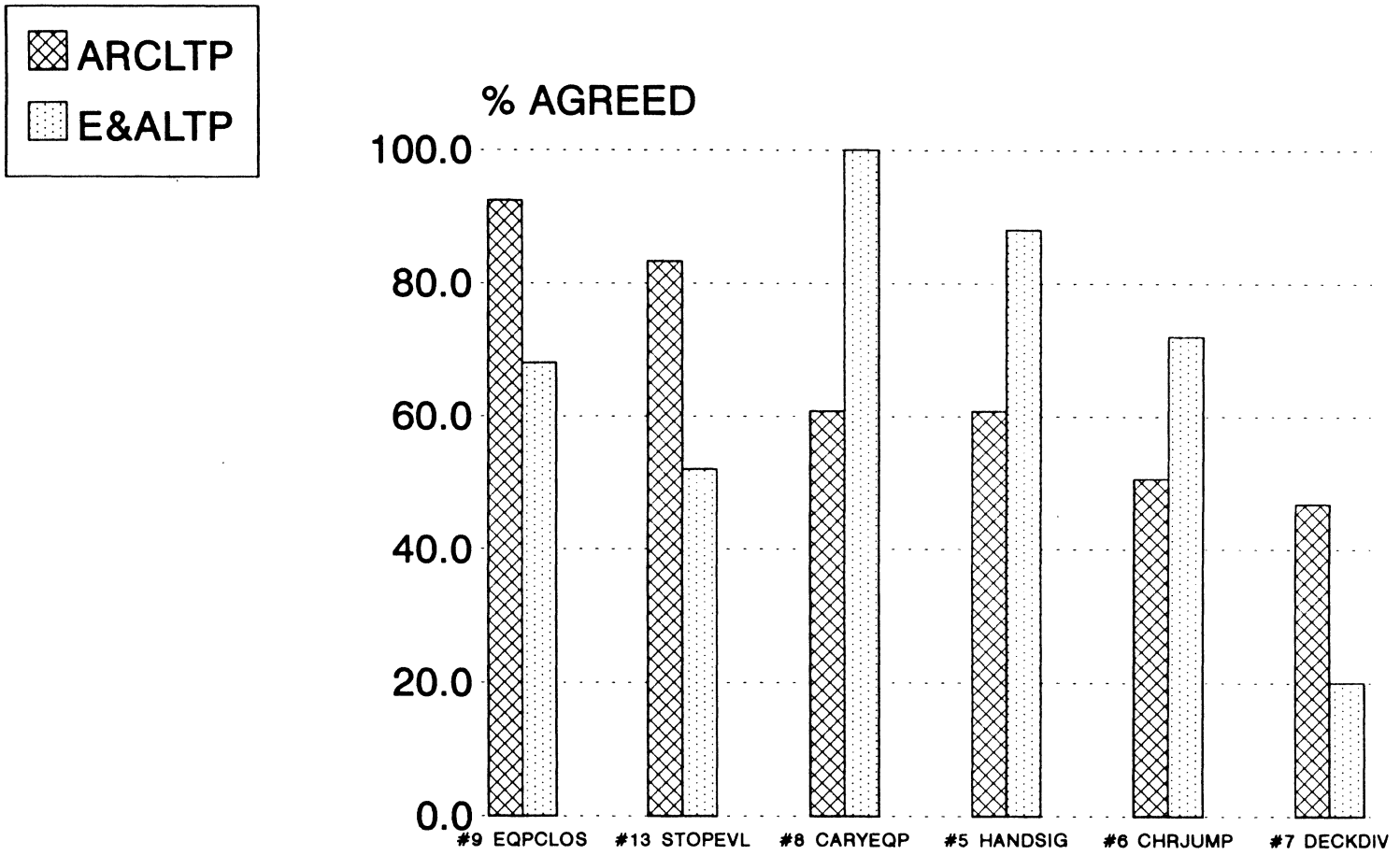
There were 20 statements on the questionnaire used to distinguish between the lifeguard training programs. Responses to these statements by frequency counts are listed in Appendix C. Nine statements which revealed at least a 20 percentage point contrast were analyzed by a chi-square computation. A visual inspection of data led the investigator to believe that no further analysis of the other 11 statements was warranted. While the "other" and

"both" categories were included in the statistical analysis and presented in the data, essentially these are considered minority situations with such a small sample size that they will not be discussed any further. It must also be noted that the category of missing data was not included in the analysis of the data sets.

As shown in Figure 2, there was a statistically significant difference between the ARCLTP and the E&ALTP in the use of hand signals as a communication system between lifeguards (x^2=15.25, 6 d.f.). The author wanted to determine if a park district had a communication system established for lifeguards to follow, and whether it is based upon the proximity of each lifeguard, the policies from the facility, or a combination of both. Some sort of communication existed at each facility as indicated by the high response to statements #4 and #5. Nearly 61 percent of ARCLTP park districts practiced a hand signal communication system, while E&ALTP park districts had an 88 percent usage of hand signals. More likely, however, lifeguards were using whistles to communicate to one another. Both programs showed above 90 percentage points when referring to using whistles (statement #4) as a communication device.

There was also a substantial difference to statement #6, pertaining to lifeguards jumping directly off their stands when entering deep water for an emergency (x^2=14.93, 6 d.f.). Seventy-two percent of E&ALTP subjects indicated

FIGURE 2. Comparison 0f Selected Responses To Lifeguard Training Programs Gathered From Park Districts In Illinois



ARCLTP	92.4	83.3	60.8	60.8	50.6	46.8
E&ALTP	68.0	52.0	100.0	88.0	72.0	20.0

the "get up and go" strategy, but only half of ARCLTP respondents agreed with this statement. The American Red Cross is and has been known for its philosophy of careful evaluation of situations and "thinking before acting" (American, 1990). Therefore, it is possible that the American Red Cross is more concerned with personal injury to the lifeguard as compared to Ellis & Associates.

A statistical difference was found in responses to sentence #7, which concerns diving off the deck in deep water to rescue a victim (x^2=13.22, 6 d.f.). A small percentage (20 percent) of E&ALTP facilities allowed lifeguards to dive from the deck because, as the literature states, a compact jump entry with a rescue tube is primarily used in this lifeguard training program. As stated in the literature, the ARCLTP offers different ways to enter the water. Only 46.8 percent of ARCLTP park districts had lifeguards diving from the deck.

As shown in Figure 2, the evidence suggests that the use of rescue equipment by lifeguards is quite diverse (x^2=26.61, 6 d.f.). One hundred percent of E&ALTP respondents agreed to carrying a piece of equipment while on duty. Only 60.8 percent of ARCLTP subjects agreed to this statement. This difference can be explained by the fact that the E&ALTP requires lifeguards to possess a rescue tube.

Another significant difference was apparent when reviewing responses to sentence #9 concerning lifeguards having rescue equipment within 5-10 feet from their chair (x^2=13.34, 6 d.f.). Sixty-eight percent of E&ALTP facilities indicated that equipment was nearby. Although this was surprising due to the fact that lifeguards must carry equipment while on duty, it can be justified by assuming that E&ALTP facilities provide additional rescue equipment near each lifeguard stand. ARCLTP lifeguards are taught lifesaving skills which do not require the use of equipment, thus, the positive responses to statement #9 were 92.4 percent.

Responses to sentence #13, applying to lifeguards stopping several feet away from the victim to evaluate the situation before attempting a rescue, did not result in a significant different (x^2=11.97, 6 d.f.). Fifty-two percent of E&ALTP lifeguards possibly practice this technique for their own personal safety. ARCLTP lifeguards are taught to execute the ready position in compliance with the American Red Cross philosophy of evaluating situations. It was hypothesized that 100 percent of ARCLTP respondents would have agreed with this statement. However, only 83.3 percent of ARCLTP lifeguards followed this procedure.

In addition to the lifeguard certification, employees should have a First Aid and Cardiopulmonary Resuscitation (CPR) course. It is the author's belief that facilities

should require Child and Infant CPR, as well as Adult CPR, because there are usually a greater number of children swimming rather than adults. Lifeguards frequently refer to their job as a babysitting service. The ARCLTP requires lifeguards to obtain Adult CPR and Standard First Aid before receiving their certification (American, 1990). As of March 1993, E&ALTP courses included CPR training in adult, child and infant skills (Staff, 1992). One hundred percent of E&ALTP respondents agreed to statement #16 which confirms that lifeguards obtain Child and Infant CPR. Even though only 86.1 percent of ARCLTP facilities enforce the Child and Infant CPR certification, there was not a significant difference between the lifeguard training programs (x^2=4.59, 6 d.f.).

One of the most important, determining factors in selecting a specific lifeguard training program might be the effectiveness of rescues in emergency situations which occur at facilities. However, there were not any significant differences when a statistical analysis was performed on responses to statements #19 and #20, which referred to the number of life-threatening emergencies or fatalities within the last five years (x^2=4.83, 3 d.f.; x^2=0.6, 3 d.f., respectively). This data supports the conclusion that there are other elements of a lifeguard training program that influence the decision about which program is chosen.

Positive & Negative Aspects Of Lifeguard Training Programs

The primary focus of this research was to gain knowledge about aquatic managers' perspectives on lifeguard training. Written summaries from subjects who took the time to thoroughly complete the last question of the survey, which referred to the positive and negative aspects of the lifeguard training program used by a facility, are included. Each anonymous response is included exactly as the subject had written it with the exception of misspelled words, grammatical errors and punctuation oversights. The following sections were categorized according to the lifeguard certification required by the park district.

Ellis & Associates

1) "Ellis & Associates is very comprehensive in their approach to guarding. The (rescue) tube makes it much safer and with the addition of CPR to the training, it completes the training in one class."

2) "Ellis Training provides a more thorough risk management program with audits and yearly re-training. However, it is very costly. The American Red Cross now is adding optional audits for agencies to utilize. This should help their existing program, which lacked risk management. Perhaps several of their rescues are not as precise or

effective as Ellis. Ellis stresses to get the job done - not particular on technique. Red Cross has stressed technique and how a rescue was performed rather than if the task is accomplished. Personally, I highly recommend and encourage all guards to obtain both certifications to have a better understanding of what it means to be a lifeguard. Both programs give you different perspectives which then gives an individual a clearer, true picture."

3) "In my professional opinion, all aspects of the Ellis & Associates certification are positive. This program understands that the average age of a lifeguard is 19 years, and they have the responsibility to guard, protect and save human life. Few other positions they will ever hold in the future will carry this level of responsibility. The training program just does not stop at water skills. A potential guard is given a well-rounded training program. We give them (lifeguards) background information on victim recognition, people management, legal liability and how to be a professional lifeguard to name a few. The total guard is educated. This certification has given our park district a highly trained employee which makes our facility fun and safe for our residents."

4) "Ellis is, in my opinion, the safest program because the equipment is always between you and the victim. Another positive aspect about the Ellis program is that the lifeguards are forced to keep their training up to date, at

all times. However, the program gets expensive!"

5) "Ellis keeps the lifeguards on their toes. They never know when an audit will occur. It gives them a goal for the summer. This training program makes them feel more professional."

6) "Ellis & Associates has improved the professionalism of our guard staff by 100%."

American Red Cross

1) "In terms of public knowledge, American Red Cross is a commonly-known certification and has credibility to the average person on the street and perhaps in court. We've always been concerned that might not be the case with Ellis. ARC is larger than any one individual and would seemingly have a guaranteed future. (We have) lack (of) confidence in the Ellis program only due to this. We do utilize the rescue tube and shallow water training aspects of the program. Additionally, ARC has been an excellent program for our District."

2) "As the manager of the pool facility and also an American Red Cross instructor for over 12 years, I have a certain bias. I feel that the Red Cross is moving in the proper direction. More help with in-service would be useful. I feel my guards come to me prepared, however, I

usually am the one that trains them."

3) "Positive aspects are that no equipment (rescue tube) to hang onto makes the rescue quicker, and guards have learned to make rescues without having to rely on equipment."

4) "The certification is a formality. What really counts is not the lifeguard card or the Ellis & Associates certification, but the insurance and on-going practice we have. The certification is only as good as the person giving the certification and in most cases represents the lifeguards ability at the time of the test and not his ability 1, 3, 6 or 12 months after the certification test. It is the management's responsibility to train and prepare their guard staff. A certification will not do this for you. You and your management are responsible for their training."

5) "The American Red Cross Lifeguard Training Certification is very good and respected in the aquatic industry. It does lack Waterpark Training, such as wave pools. I do feel that everyone should be made aware of them, but pool operators should conduct in-service training for their specific facility. I know the certification our lifeguards have will stand up in court, as long as they do their job and are not negligent. I have yet to see Ellis & Associates stand up in court and see how they are backed. American Red Cross has been around for a long time, and I am

sure that other certifications used their knowledge and expertise. It is too bad that there is competition in the field. I have known American Red Cross and aquatics for a long time. They have been striving to further re-enhance their program. There isn't a doubt in my mind that others have had to use that expertise. I stand behind them but do hope they form a risk management program to make all those with certifications more reliable (i.e. spot checks). Ellis & Associates does this. However, local chapters can work at doing this on their own -- which some do. American Red Cross is TOTALLY committed to aquatics as compared to others. (Ex. boating, basic water safety, emergency water safety, fitness, lifeguarding, water safety instruction, etc.)."

Other Certifications

1) "We feel a certification is only as good as your in-house training. During the summer, we have a weekly guard meeting where we practice CPR, rescue breathing, emergency situations, spinal injury and severe weather drills. We also require the guards to swim one-quarter mile before or after each shift. We audit our own pools with the park district VCR. We film pre-season spinal injury and CPR skills. We also periodically film guards while on duty and show them (lifeguards) during guard meetings. We save these

films for insurance purposes."

2) "There are several national certifications for lifeguard training - all have strong and weak points. It is up to the administrative district staff to adopt a certification and adjust to their needs of aquatic operation."

Both Certifications

1) "American Red Cross teaches first response in all situations and is recognized by the County Health Department. Ellis teaches a set standard of skills specifically for pools and is recommended by our insurance company. American Red Cross methods are not specifically for a pool environment, and Ellis is expensive! Perhaps we were overly trained, but 1992 was our first season. Guards came in with American Red Cross, and the Ellis training put everyone on the same wave length. If we had to choose, the staff would pick Ellis because it is so pool focused."

2) "An individual can hold a certification from ARC or Ellis; however, they must pass requirements set by the park district in order to become an employee. The water test we hold demonstrates if a person can or cannot perform what their certification required - 500 yard swim, tread water with brick, etc. We use an airhorn to clear the pool, and other guards know when another guard is entering the pool on

a rescue attempt. This clears the pool without a doubt, so we can concentrate on the rescue."

3) "We require Red Cross. We train guards by using a combination of Red Cross, Ellis, past experiences (open water). I believe in skill checks throughout the season. I do not believe in auditing guards in the manner Ellis does. I am an Ellis instructor. I like some of the ideas and training, but I do not agree with all of the methods; therefore, I do not require my guards to be Ellis certified. Positive aspects - use all possible resources and take the best aspects and eliminate those that don't fit your facility. The key to remember is that all aquatic settings are vastly different. And, as a manager, we need to design a program of training specifically for our facility."

Summary

The results of this study yielded a relatively small number of meaningful differences between the ARCLTP and the E&ALTP. The focus of this study was to determine if significant differences existed between aquatic managers' perceptions of lifeguard training programs assuming that rescue procedures of the ARCLTP and the E&ALTP prepared lifeguards to respond effectively during emergency situations. Due to the variation of the answers received, the author cannot conclude either program is superior to the

other. A lack of substantial difference in the data demonstrates that each certification is perceived by aquatic managers as meeting the requirements of an effective lifeguard training program. Therefore, the null hypothesis can be accepted.

CHAPTER V

SUMMARY

Because there is a need for additional research concerning lifeguard training programs, this study compared aquatic managers' perception of the American Red Cross Lifeguard Training program (ARCLTP) to the Ellis & Associates National Pool and Waterpark Lifeguard Training program (E&ALTP). Park district pool supervisors/managers or aquatic directors in the state of Illinois were used subjects. Data, gathered by a questionnaire and statistically analyzed by percentages and chi-square tests, supported the hypothesis that both programs prepare lifeguards to act upon emergency situations. However, the responses from park district personnel suggest that each lifeguard training program has strong and weak points. All factors examined in this study should be considered in order for pool management to determine which program would best fit the needs of the facility. The data gathered in this study measured each lifeguard training program's procedures in terms of: 1) emergency action plans, 2) communication

systems, 3) entries, 4) approaches, 5) rescues, 6) risk management and 7) legalistic concerns.

Discussion

Subjects who used the ARCLTP reported that it has been the choice at their respective facilities for many years. The American Red Cross has been training people in Water Safety since the early 1900s, while Ellis & Associates has been functioning less than a decade. The American Red Cross offers a wide-range of certifications in both aquatic-related courses and programs in health and safety, whereas, Ellis & Associates is an aquatic risk management program. Risk management is a process designed to reduce preventable injuries/accidents and to minimize the financial loss to facilities.

Financial costs of each lifeguard training program to the park district should be considered. Subjects in the study identified the cost factor as a negative aspect of E&ALTP. The American Red Cross has been considered an organization which services communities. When an ARCLTP instructor charges a park district for teaching a course, this philosophy is hindered. Lack of funding for the American Red Cross organization has created the need to charge fees for certifications. Ellis & Associates' lifeguarding license is much more costly to park districts

than the American Red Cross certification because of an annual fee for using the E&ALTP and a fee for each independent audit. This cost ranges from $800 to $2000 depending upon the number of swimming pools and how many patrons use the facility. Due to the varying costs between the lifeguard training programs, it can be concluded that a larger park district with more swimming pools and lifeguards might have more money and may financially be able to afford the E&ALTP.

One important factor for each facility and its lifeguard training program is the personal risks to the rescuer and the victim. Each of the statements on the questionnaire, where a statistical significant difference was noted, reflected the preparation of lifeguards in the rescue of distressed swimmers.

The E&ALTP appears to emphasize speed rather than technique. The E&ALTP lifeguard executes a 10/20 second protection rule for victim recognition, usually follows that with a compact jump entry (depending on the depth of the water) and then makes direct contact with the victim. However, by requiring a rescue tube to be carried while on duty, the E&ALTP has protected the rescuer effectively from a panic stricken victim.

Unlike the E&ALTP, the ARCLTP seems to be more concerned with skills and evaluation of the circumstances rather than speed. According to the data analysis, this

theory may be changing. ARCLTP park districts are implementing their own risk management strategies and lifeguarding policies. The use of the ready position requires all ARCLTP lifeguards to stop and evaluate a situation for a few seconds before rescuing a victim. Because this skill is required by the ARCLTP, 100 percent of these respondents should have agreed with this concept. However, only 83.3 percent of ARCLTP respondents indicated that they followed this procedure. One might assume that the ARCLTP may be eliminating the ready position in order to be more competitive with the E&ALTP.

Regardless of the lifeguard training certification, the aquatic management at a park district should be responsible for determining how effectively its lifeguard staff operates. It helps to have lifeguards previously trained in the skills of victim recognition, entries, approaches and rescues. However, aquatic personnel are responsible for the development of emergency action plans, communication systems, risk management and legalistic approaches, which directly influences the procedures previously mentioned. Ellis & Associates offers a program that makes this responsibility seem effortless. The ARCLTP may be heading in this same direction. Aquatic management alone could accomplish this task by using its own available resources. For example, when an Ellis & Associate staff person conducts an independent audit at a facility and finds a lifeguard

inadequately performing the required standards of lifeguarding, that lifeguard's license is revoked immediately. This situation could be considered similar to firing a lifeguard which an aquatic facility can determine for itself.

On the other hand, Ellis & Associates should be commended on its requirement for the use of a rescue tube. This requisite effectively protects the lifeguard and/or the victim from danger during emergency situations, as supported by the literature. Another positive element of the E&ALTP is the level of responsibility given to each lifeguard. A lifeguard may feel more like a professional on the job and respected by his/her supervisors, as stated by selected subjects' responses.

The E&ALTP requires lifeguards to update their training every year unlike the ARCLTP, which updates every three years. As one respondent stated, "the certification is only as good as the person giving the certification." In retrospect, the responsibility of training falls once again in the hands of the aquatic management at a park district.

Conclusions

This study was designed to reveal how pool supervisors/ managers or aquatic directors perceived various lifeguard

training programs. The following conclusions were drawn from the data collected in the present study.

Demographic Data

1. The closer a park district is to a large city exceeding 50,000 residents, the more the awareness and utilization of E&ALTP.
2. Park districts representing areas of smaller population (less than 10,000 residents) more commonly used the ARCLTP.
3. Regardless of acreage owned by a park district, the majority of the facilities used the ARCLTP.
4. Park districts with a large lifeguard staff are more likely to use the E&ALTP than those with a smaller staff.

Subjects' Responses To The Questionnaire

1. Whistles are more commonly used as a communication device than hand signals for both programs.
2. E&ALTP facilities more frequently than ARCLTP facilities had lifeguards jump directly off their stands when entering deep water for an emergency.
3. ARCLTP lifeguards are much more apt (26.8 percent) to dive off the deck in deep water to rescue a victim.

The entry most commonly used by E&ALTP was the compact jump entry.

4. Because the E&ALTP requires a lifeguard to possess a rescue tube, all of E&ALTP respondents agreed that lifeguards carry a piece of equipment while on duty.
5. Because ARCLTP lifeguards are taught lifesaving skills which do not require the use of equipment, 92.4 percent of these facilities indicated having equipment 5-10 feet from the lifeguard chair.
6. Although the ARCLTP requires lifeguards to execute a ready position to evaluate situations, only 83.3 percent of ARCLTP lifeguards follow this procedure. More than half of E&ALTP lifeguards practice this technique for their own personal safety, which is surprising due to the fact that a ready position is not required by this program.
7. Currently, Child and Infant CPR is required by the E&ALTP but not the ARCLTP.
8. The number of emergency situations or fatalities within the last five years at each facility did not influence the choice of a lifeguard training program.

Recommendations For Further Research

1. Study opinions concerning the similarities or differences of various lifeguard training programs

from other states.

2. Study different types of aquatic facilities instead of only park districts in the state of Illinois.
3. Study entire curricula of lifeguard training programs used at swimming pools and waterparks.
4. Study curricula of lifeguard training programs for other types of aquatic areas (i.e. beaches and lakes).

References

American National Red Cross. (1990). American Red Cross Lifeguarding. United States of America: Author.

Andres, F. F. (1979). Swimming Pool Lifeguarding. Journal of Physical Education and Recreation, 42-42.

Berry, D. (1992). Developing an Operational Policy Manual for University Aquatic Programs. NIRSA Journal, 32-33.

Borozone, J., Morehouse, C. A. & Pechar, S. F. (1977). Safety in Aquatic Activities. (Sports Safety Monograph No. 5). Washington D.C.: American Alliance for Health, Physical Education and Recreation.

Carroll, R. J., Langendorfer, S. & Levin, S. (1990). The Worst Case Scenario: Why Amber Myers Drowned in her Swimming Class. Management Strategies in Recreational Sports. Corvallis, OR: National Intramural-Recreational Sports Association.

D'Arnall, D. G. (1976). New Dimensions in Lifeguarding. Journal of Physical Education and Recreation, 36-37.

Davies, V. & Johnston, R. J. (1991). The Leisure Revolution. Athletic Business, 69-72.

Dimike, D. W. (1991). The Lifeguard Puzzle: Putting the Pieces of Safety Together. The National Aquatics Journal, 14-15.

Ellis, J. (1990). Waterparks Lead the Way. Parks and Recreation, 50-53.

Ellis, J. L. & Fick, C. L. (1992). National Pool and Waterpark Lifeguard Training Manual. United States of America: Ellis & Associates.

Fuerst, C. F. (1992). Rebirth of the Pool. Athletic Business, 30-38.

Giles, M. C. & Bird, E. J. (1990). Aquatics Move to the Future: Red Cross Program Undergoes Major Change. NIRSA Journal, 26-27.

Griffiths, T. J. (1987). Legalistic Approach To Training Lifeguards. The National Aquatics Journal, 2-3.

Guralnik, D. (Ed.). (1982). Webster's New World Dictionary of the America Language. New York: Simon & Schuster.

Hunsucker, J. (1991). Motivating Your Lifeguards. The National Aquatics Journal, 9-11.

Johnson, W. C. (1986). More Than Just a Splash; It's the Wave of the Future. Parks and Recreation, 34.

McCloy, J. (1988). Today's Crisis in Lifeguarding. The National Aquatics Journal, 5-7.

McNally IV, A. (1992). Rand McNally 1992 Road Atlas, 68th ed. Chicago, Illinois: Rand McNally & Company. 120.

O'Conner, J. S. (1986). A United States Accidental-Drowning Study. San Antonio, TX: National Swimming Pool Foundation.

Osinski, A. (1988). Legal Responsibilities of Lifeguards: Avoiding Lawsuits. Journal of Physical Education, Recreation and Dance. 73-75.

Palm, J. (1974). ALERT: Aquatic Supervision in Action from the National Lifeguard Service. Canada: The Royal Life Saving Society.

Plueckhahn, V. C. (1979). Drowning: Community Aspects. The Medical Journal of Australia, 1183.

Puch, D. (1991, September 19). IMPE Pool Accident Ends in Death. The Daily Illini, p. 1.

Rodgers, G. B. (1989). Child Drownings and Near-Drownings in Residential Swimming Pools: Contributing Factors and Intervention Strategies. The National Aquatics Journal. Winter, 1989.

Staff. (Summer 1992). NPWLTP to Include CPR! Ellis & Associates Newsletter. 1.

Thygerson, A. L. (1972). Safety Principles, Instruction and Readings. New Jersey: Prentice-Hall, Inc.

Tyson, K. (1990). Developments and Future Trends in Lifeguarding. Journal of Physical Education and Recreation, 40.

Wernicki, P. G. & Glorioso, J. (1991). Lifeguarding: The Sport, the Profession, the Hazards. The Physician and Sportsmedicine, 84-95.

APPENDIX A

COVER LETTER

February 12, 1993

Dear Director:

I am a graduate student at Eastern Illinois University working toward a Master's Degree in Sports Administration. I am conducting a questionnaire survey as a part of my Master's Degree thesis project.

The purpose of the study is to critically analyze how pool supervisors perceive different lifeguard training programs. The curriculum of the American Red Cross Lifeguard Training program and the Ellis & Associates National Pool and Waterpark Lifeguard Training program will be studied.

Your facility has been chosen because it is a member of the Illinois Association of Park Districts and/or the Illinois Park & Recreation Association. Your help in the completion of the attached questionnaire would be greatly appreciated and would enable me to complete this study. If you have a seasonal pool manager who is unable to answer at this time, please fill it out to the best of your knowledge.

Please return all completed materials by March 15, 1993. Thank you for your cooperation.

Sincerely,

Erika Smith

Erika Smith

APPENDIX B

QUESTIONNAIRE

POOL SUPERVISOR'S PERSPECTIVE ON LIFEGUARD TRAINING

1. What is your job title? _____
2. What is your zip code? _____
3. What is the population of the city/town? _____
4. How many acres are owned by the park district? _____
5. How many lifeguards are staffed? _____
6. What lifeguard certification is required by the park district? _____
7. How many swimming pools are at the facility?
   indoor _____ outdoor _____

Please circle "A" for agree, "D" for disagree and "N" for not applicable in the following statements as they apply to the park district's policies and procedures.

1. Lifeguards attend a preseason training session. A D N
2. Lifeguards participate in regularly scheduled in-service trainings. A D N
3. A written plan for handling emergency situations is designed specifically for the facility. A D N
4. Whistles are used as a communication system between lifeguards. A D N
5. Hand signals are used as a communication system between lifeguards. A D N
6. Lifeguards jump directly off lifeguard chairs when entering deep water for an emergency. A D N
7. If a lifeguard enters deep water from the deck, a shallow dive is most commonly used. A D N
8. Lifeguards carry a piece of rescue equipment while on duty. A D N
9. Lifeguards have rescue equipment within 5-10 feet from the lifeguard chair. A D N
10. Lifeguards use the crawlstroke when approaching a victim for most rescues. A D N
11. Lifeguards keep their heads above water when approaching a victim if the distance is more than 25 yards. A D N
12. Rescue equipment is between the lifeguard and the victim when attempting a rescue. A D N

13. Lifeguards stop several feet away from the victim to evaluate the situation before attempting a rescue. A D N

14. Lifeguards are periodically informed of legal liability and negligence. A D N

15. Lifeguards are aware of their duties before, during and after accidents occur. A D N

16. Lifeguards have the Child and Infant CPR certification. A D N

17. Lifeguards inform other lifeguards of an emergency before attempting a rescue. A D N

18. The park district is satisfied with the lifeguard's training. A D N

19. The park district has had a life-threatening emergency within the last five years. A D N

20. The park district has had a fatality within the last five years. A D N

In your opinion, what are the positive and negative aspects of the certification required by the park district?

Additional comments:

Thank you for your cooperation in completing this questionnaire.

APPENDIX C

ORIGINAL DATA BY FREQUENCY COUNTS

AMERCIAN RED CROSS DATA (n=79)

QUESTION #	AGREE	DISAGREE	NOT APPLICABLE	MISSING
1) PRESEASN	72	4	2	1
2) INSERV	68	6	2	3
3) PLAN	75	4	--	--
4) WHISTLES	72	4	3	--
5) HANDSIG	48	18	13	--
6) CHRJUMP	40	30	5	4
7) DECKDIV	37	33	5	4
8) CARYEQP	48	25	4	2
9) EQPCLOS	73	5	1	--
10) CRAWLAPPR	59	11	8	1
11) HEADUP	45	13	18	3
12) EQPBETWN	68	8	1	2
13) STOPEVAL	65	9	4	1
14) LEGAL	74	2	3	--
15) DUTIES	79	--	--	--
16) CAICPR	68	8	2	1
17) EMERGSIG	66	8	2	3
18) SATISFY	70	7	2	--
19) EMERG5	29	41	8	1
20) FATAL5	7	66	6	--

ELLIS & ASSOCIATES DATA (n=25)

QUESTION #	AGREE	DISAGREE	NOT APPLICABLE	MISSING
1) PRESEASN	25	--	--	--
2) INSERV	25	--	--	--
3) PLAN	24	1	--	--
4) WHISTLES	24	1	--	--
5) HANDSIG	22	3	--	--
6) CHRJUMP	18	3	4	--
7) DECKDIV	5	15	5	--
8) CARYEQP	25	--	--	--
9) EQPCLOS	17	6	2	--
10) CRAWLAPPR	18	3	2	2
11) HEADUP	16	4	3	2
12) EQPBETWN	23	1	--	1
13) STOPEVAL	13	9	2	1
14) LEGAL	22	1	2	--
15) DUTIES	25	--	--	--
16) CAICPR	25	--	--	--
17) EMERGSIG	24	1	--	--
18) SATISFY	24	1	--	--
19) EMERG5	6	18	--	1
20) FATAL5	1	22	2	--

OTHER CERTIFICATION'S DATA (n=5)

QUESTION #	AGREE	DISAGREE	NOT APPLICABLE	MISSING
1) PRESEASN	4	1	--	--
2) INSERV	5	--	--	--
3) PLAN	5	--	--	--
4) WHISTLES	5	--	--	--
5) HANDSIG	1	2	2	--
6) CHRJUMP	1	2	2	--
7) DECKDIV	--	4	1	--
8) CARYEQP	1	4	--	--
9) EQPCLOS	5	--	--	--
10) CRAWLAPPR	4	--	1	--
11) HEADUP	2	--	3	--
12) EQPBETWN	4	--	1	--
13) STOPEVAL	3	1	1	--
14) LEGAL	4	1	--	--
15) DUTIES	5	--	--	--
16) CAICPR	5	--	--	--
17) EMERGSIG	5	--	--	--
18) SATISFY	5	--	--	--
19) EMERG5	2	3	--	--
20) FATAL5	--	5	--	--

AMERCIAN RED CROSS AND ELLIS & ASSOCIATES DATA (n=12)

QUESTION #	AGREE	DISAGREE	NOT APPLICABLE	MISSING
1) PRESEASN	12	--	--	--
2) INSERV	12	--	--	--
3) PLAN	12	--	--	--
4) WHISTLES	12	--	--	--
5) HANDSIG	10	2	--	--
6) CHRJUMP	6	6	--	--
7) DECKDIV	5	7	--	--
8) CARYEQP	12	--	--	--
9) EQPCLOS	9	3	--	--
10) CRAWLAPPR	7	5	--	--
11) HEADUP	9	3	--	--
12) EQPBETWN	10	1	--	1
13) STOPEVAL	8	3	--	1
14) LEGAL	10	--	1	1
15) DUTIES	11	--	--	1
16) CAICPR	10	1	--	1
17) EMERGSIG	11	--	--	1
18) SATISFY	11	--	--	1
19) EMERG5	5	4	1	2
20) FATAL5	--	8	3	1